

# DONALD CANT WATTS CORKE

## Report on the Cost Implications of Providing Pathways and Spaces in Buildings for Telecommunications Cabling and Equipment

### Australian Building Codes Board

Assessment Report on Cost Implications

10 July 2015

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Buildings for Telecommunications  
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# Provision of Pathways and Spaces in Buildings for Telecommunications Cabling and Equipment

## Australian Building Codes Board

### Cost Impact Assessment Report

10 July 2015

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# Contents

1 EXECUTIVE SUMMARY	1
1.1 Methodology	1
1.2 Proposals	1
2 BASIS OF REPORT	2
2.1 Methodology	2
2.2 Documentation	3
2.3 Abbreviations	3
2.4 Clarifications	4
2.5 Assumptions	4
2.6 Inclusions	4
2.7 Exclusions	4
3 INFORMATION ON SAMPLE PROJECTS USED	5
3.0 Summary of Findings	9
3.0 Detailed Findings	10
APPENDIX 1 – SUMMARY OF DCWC COST ESTIMATES FOR THE BUILDING CLASS AND TYPES OF BUILDINGS	11
APPENDIX 2 – DETAILED BREAKUP OF ESTIMATED CONSTRUCTION COSTS	12

# 1 EXECUTIVE SUMMARY

Donald Cant Watts Corke (DCWC) at the request of the Australian Building Codes Board (ABCB) has compiled a cost impact analysis of the proposed changes to Deemed to Satisfy (D-t-S) provisions for the inclusion of in-building telecommunications pathways and spaces for telecommunications cabling and equipment in buildings.

The analysis encompasses six building classes and seven buildings types as listed below:

- Class 1a Single Storey House
- Class 2 Three Storey Residential Apartment
- Class 2 Seven Storey Residential Apartment
- Class 2 Eighteen Storey Residential Apartment
- Class 3 Two Storey Motel/Hotel
- Class 3 Eight Storey Hotel
- Class 3 Twenty Storey Hotel
- Class 5 Two Storey Office
- Class 5 Seven Storey Office
- Class 5 Twenty Storey Office
- Class 6 Four Level Regional Shopping Centre
- Class 6 Two Storey Restaurant
- Class 9c Aged Care Facility

## 1.1 Methodology

The analysis is presented in a summary table for each building Class and type. The table details the costs associated with providing infrastructure for pathways and spaces for telecommunications cabling and equipment and has been calculated from first principles. There are three scenarios investigated including:

1. Current practice and construction standards
2. Proposed Deemed-to-Satisfy provisions if adopted
3. Adequate provision not made and retrofit required

## 1.2 Proposals

This report focuses on a number of key requirements which are reviewed and scope of works defined in order to meet the proposed minimum requirements:

1. Telecommunications entry points
2. Telecommunications equipment room
3. Vertical risers

4. Telecommunications spaces – Floor distributors and riser cupboards
5. Telecommunications internal lead in conduit

## 2 BASIS OF REPORT

### 2.1 Methodology

The aim of this assessment is to determine the impacts of requiring pathways and spaces in buildings for telecommunications cabling and equipment.

The brief was to provide an analysis of the cost implications of the proposals using examples of the selected building Classes as the basis of reporting. Our cost assessment provide the ABCB with the information to review a summary of the cost implications by each scenario and by example of the selected building classes.

We provide a summary of the overall costs across all six building classes and seven buildings types. Also provided is an analysis of the effects of these proposals on the buildings Nett Lettable Area (NLA) where appropriate.

The following outlines the methodology used in preparation of the analysis:

1. Tabulate and cost the various building works requirements as described in the Public Comment Draft of the NCC 2016 Volume 1 and 2;
2. Compile the scope of works required for current and proposed provisions. This is done based on a first principles estimating process whereby quantities are established, then a rate applied to calculate a total cost;
3. Establish the unit rates of construction followed by 'out-turn' costs for each building element and type inclusive of contractors preliminaries, margin and associated consultant fees;
4. Select representative sample buildings, constructed in Australian capital cities, for each building Class and type;
5. Confirm the approximate total project cost for each sample building;
6. Quantify the approximate cost increase of the proposed draft provisions for the inclusion of in-building telecommunications pathways and spaces for cabling and equipment under three scenarios, current practice, as specified and retrofitting scenarios; and
7. Present the results as a summary of total cost and percentage increase over the base cost of each scenario, together with the anticipated reduction in useable floor areas.

The cost analysis is based on DCWC's 'In-house' cost database and industry accepted construction cost publications including:

1. Rawlinson's Australian Construction Handbook (Rawlinson, Edition 33, 2015); and
2. The Building Economist (Australian Institute of Quantity Surveyors, March 2015)

## 2.2 Documentation

The review has been undertaken on the basis of the following documentation:

1. NCC 2016 Volume 1 Public Comment – Draft of June 2015
2. NCC 2016 Volume 2 Public Comment – Draft of June 2015
3. Telecommunications Spaces and Pathways and the NCC – Discussion Paper 2014
4. Overview of a proposal to regulate telecommunications pathways and spaces - ABCB 2015

## 2.3 Abbreviations

ABCB	Australian Building Codes Board
BCA	Building Code of Australia
DCWC	Donald Cant Watts Corke Pty Ltd
FECA	Fully Enclosed Covered Area
GFA	Gross Floor Area
NCC	National Construction Code
NLA	Net Lettable Area
NSA	Net Saleable Area
SOU	Sole Occupancy Unit

## 2.4 Clarifications

In relation to the estimates provided the following clarifications are noted:

1. Total construction costs are as at June 2015.
2. Preliminaries allowance for cost of retrofit is marginally higher compared to the new build costs due to the additional trades required and increased coordination. This applies across all building Classes.
3. Costs are calculated on the basis that all buildings are constructed on greenfield sites.
4. Office building grades referenced hereafter are as defined by A Guide to Office Building Quality 2012, as published by the Property Council of Australia.

## 2.5 Assumptions

In relation to the estimates provided the following assumptions are noted:

1. All building vertical risers and telecommunications equipment rooms are assumed to consist of a maximum of three walls, the forth wall being a requirement of the base building works. This assumption is for retrofitting current practice.
2. Retrofitting to most buildings are carried out and installed internally and not via conduits fixed to the external face of the building. With exceptions of low rise and lower development quality are installed via conduits external to the building.
3. In current practice, telecommunications internal lead in conduit in office buildings are assumed not required due to the fact that they generally end at the riser. It is the tenant's responsibility to install conduit and/or cabling from the riser or equipment room to the tenancy on each floor. This is not a requirement of the specification in class 5, 6 or 9c buildings.
4. Most retrofitting projects is deemed to incur additional scopes of work, involving demolition to building fabric, creation of pathway and on completion, patch, reinstate and paint building fabric damaged during the works.

## 2.6 Inclusions

Building costs are generally total costs relative to the section of the building being analysed and are inclusive of builder's preliminaries, overheads and margin, together with project design and delivery costs. Rates where noted are inclusive of the material supply, labour and all sundries required for installation.

## 2.7 Exclusions

All estimates contained in this report exclude:

- Goods and Services Tax (GST);
- Design fees, authority fees, contingency and costs associated with staging and delay;



- Escalation cost beyond December 2015;
- Excavation in rock;
- Latent condition including removal of contaminated materials;
- Painting, floor finishes, power, ventilation and security costs to telecommunications equipment rooms. If this is a requirement it would apply to all scenarios hence have zero cost impact.
- Equipment and cabling costs.

## 3 INFORMATION ON SAMPLE PROJECTS USED

Provided below are details of the sample projects used in preparing this report together with the key assumptions relevant to the estimates:

### Class 1a Single Storey House

- (i) Single level three bedroom ensuite brick veneer dwelling with slab on ground construction
- (ii) The house is set back 8 metres from the front boundary
- (iii) Retro fitting is to be carried out via conduits on external wall, and will include minor scope for demolition to the perimeter wall and internal lining where applicable and patching and painting on completion
- (iv) Current practice does not provide dedicated pathway from entry point to main switchboard

### Class 2 Three Storey Residential Apartment

- (i) Apartment complex comprising of three storey buildings containing fifty-four apartments with one level of basement parking. The total apartment net sellable area (NSA) of approximately 4,420m<sup>2</sup> in a variety of layouts.
- (ii) Typical construction consists of post-tensioned in-situ concrete structural slab with brick veneer construction mainly. Internal party walls comprise mainly of lightweight fire rated shaft wall system and concrete block construction to riser and stair walls.
- (v) Retro fitting can be carried out via external wall in lieu of significant demolition and routing internal to the building, the scope will require minor demolition to the perimeter wall and internal lining where applicable and patching and painting on completion
- (vi) It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.
- (vii) The selected complex is considered medium quality

## Class 2 Seven Storey Residential Apartment

- (i) Apartment complex comprises of seven storey buildings containing ninety-eight apartments with three level of basement parking. The total apartment net sellable area of approximately 8,330m<sup>2</sup> in a variety of layouts.
- (ii) The structure consists of post-tensioned in-situ concrete structural slab with brick veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and concrete block construction to riser and stair walls.
- (iii) The selected complex is considered high quality.

## Class 2 Eighteen Storey Residential Apartment

- (i) Apartment complex comprises of an eighteen storey building containing 252 apartments with three levels of basement parking. The total Net Sellable Area (NSA) is approximately 20,100m<sup>2</sup> in a variety of layouts.
- (ii) The building consists of post-tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft liner system and block construction to risers and stair wells
- (iii) The selected complex is considered medium quality.

## Class 3 Two Storey Motel

- (i) Three level local four star hotel/motel consisting of eighty-five SoUs with retail, some commercial and restaurants on the ground floor and serviced hotel rooms over the two levels above. Total Gross Floor Area (GFA) of approximately 7,920m<sup>2</sup>.
- (ii) Construction generally consists of post-tensioned in-situ concrete structural slab with brick veneer facade. Internal party walls consist of concrete block with plasterboard lining over furring channels.
- (iii) Retro fitting can be carried out via external wall in lieu of significant demolition and routing internal to the building, the scope will require minor demolition to the perimeter wall and internal lining where applicable and patching and painting on completion.
- (iv) It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.

## Class 3 Eight Storey Hotel

- (i) Eight level five star hotel including 120 SoUs, comprising retail, commercial and restaurants on the ground floor. Total Gross Floor Areas (GFA) of approximately .14,000m<sup>2</sup>.
- (ii) Construction generally consists of post-tensioned in-situ concrete structural slab, precast external wall. Internal party walls consist of precast concrete with plasterboard lining over furring channels.

### Class 3 Twenty Storey Hotel

- (i) Twenty level five star hotel including 422 SoUs, comprising 364 rooms, 26 suites and 32 apartments, with retail, commercial and restaurants on the ground floor and serviced hotel rooms from level four above. Total Gross Floor Areas (GFA) of approximately .31,000m<sup>2</sup>.
- (ii) Construction generally consists of post-tensioned in-situ concrete structural slab precast external wall. Internal party walls consist of precast concrete with plasterboard lining over furring channels.
- (iii) The hotel is in a CBD environment with very high quality façade and internal finishes.

### Class 5 Two Storey Office

- (i) Two level commercial office development consisting of approximately 130m<sup>2</sup> floor plates.
- (ii) Construction consists of a precast concrete beam structural flooring system, with masonry internal base building walls and glazed shop front walls to the facade generally. Internal party walls consist of masonry with plasterboard lining over furring channels.
- (iii) Retro fitting can be carried out via external wall in lieu of significant demolition and routing internal to the building, the scope will require minor demolition to the perimeter wall and internal lining where applicable and patching and painting on completion

### Class 5 Seven Storey Office

- (i) Six level 'A-Grade' commercial CBD office building. Total Gross Floor Area (GFA) of approximately 45,000m<sup>2</sup>.
- (ii) The building consists of post-tensioned in-situ concrete structural slab with curtain wall façade. Internal party walls consist of precast concrete and masonry with plasterboard lining over furring channels.

### Class 5 Twenty Storey Office

- (i) Twenty level 'A-Grade' commercial CBD office building. Total Gross Floor Area (GFA) of approximately 85,000m<sup>2</sup>.
- (ii) Construction consists of post-tensioned in-situ concrete structural slab with curtain wall façade. Internal party walls consist of precast concrete and masonry with plasterboard lining over furring channels.

### Class 6 Four Level Regional Shopping Centre

- (i) Regional shopping centre over four levels. Total Gross Floor Area (GFA) of approximately 50,000m<sup>2</sup>.

- (ii) Construction consists of a conventional in-situ concrete structural slab with precast concrete and glazed shopfront facade. Internal party walls consist of precast concrete and masonry with dry wall linings over furring channels.

## Class 6 Two Storey Restaurant

- (i) Two level restaurant building with approximately 115 m<sup>2</sup> (GFA) floor plates.
- (ii) Construction consists of in-situ concrete structural slab with masonry and glazed shopfront façade. Internal party walls consist of block walls with drywall linings over furring channels.
- (iii) Retro fitting can be carried out via external wall in lieu of significant demolition and routing internal to the building, the scope will require minor demolition to the perimeter wall and internal lining where applicable and patching and painting on completion

## Class 9c Aged Care Facility

- (i) The sample nursing home consist of Residential Care Facility. The facility is to include 40 high and 60 low care places.
- (ii) The building consist of 4 floors with hotel style accommodation ie each room consist of ensuite with shared common areas.
- (iii) The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells
- (iv) Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 19m<sup>2</sup>

## 3.1 Summary of Findings

In preparing the costs associated with proposed specification changes the following observations are made:

### **Telecommunications Entry Point**

- (i) Current practice in class 3, 5, 6, 9 buildings is sufficient and the sample buildings made provisions for telecommunications entry point.
- (ii) Current practice in class 1 and 2 buildings is generally insufficient and the sample buildings made no provisions for telecommunications entry point. Other pathway elements are provided in a building to different extents, there is generally no entry point allowed for

### **Telecommunications Equipment Rooms**

- (i) Current practice in class 5, 6, 9 buildings is sufficient and the sample buildings made provisions for telecommunications equipment room, this is generally provided in the way of main switchboard room.
- (ii) Current practice in class 1 and 2 low rise is generally insufficient and the sample buildings made no provisions for telecommunications equipment room. However in class 2 and 3 over 3 storeys made sufficient provisions for equipment rooms.

### **Vertical Risers**

- (i) Current practice in class 2, 3, 5, 6, 9 buildings is sufficient and the sample buildings made provisions for sufficient sized risers
- (ii) Current practice in class 1 and smaller class 2 (Say up to 3 storeys high) buildings is generally insufficient and the sample buildings provided very little or no riser space.

### **Telecommunications Space – Floor Distributors and Riser Cupboards**

- (i) The only building class which currently provide this is 9 – aged care in the way of data room on each floor of approximately 9m<sup>2</sup>.
- (ii) The proposed requirement may be provided in class 5 buildings where single tenant is in place, however where multiple tenancies are in place they generally provided through fitout.
- (iii) Current practice in class 2, 3 and 5 provides a cupboard space associated with the riser which is generally accessed via appropriately sized doors.
- (iv) Costs associated with meeting proposed Deemed-to-Satisfy provisions has been allowed for class 2 and 3 buildings.
- (v) Costs associated with retrofitting to meet proposed Deemed-to-Satisfy provisions has not been allowed, as in most cases there are not sufficient floor space to accommodate floor distribution space.

### **Telecommunications Internal Lead in Conduits**

- (i) Our review indicate in situations where there are multiple SoUs, dedicated internal lead in conduits are generally not provided for. However the general provision is via horizontal cable trays in corridors and common space.
- (ii) In as specified and retrofit scenarios the analysis includes costs for installing dedicated conduits into available cable trays.

## 3.1 Detailed Findings

Refer to Appendix 1 for summary of the detailed findings.

# APPENDIX 1 – SUMMARY OF DCWC COST ESTIMATES FOR THE BUILDING CLASS AND TYPES OF BUILDINGS

**TELECOMMUNICATIONS SPACES AND PATHWAYS AND THE NCC**

Class	Class 1a	Class 2	Class 2	Class 2	Class 3	Class 3	Class 3	Class 5	Class 5	Class 5	Class 6	Class 6	Class 9c
<b>Description</b>	Single Storey Dwelling	3 Storey Accommodation	7 Storey + Accommodation	15 Storey + Accommodation	2 Storey Motel	8 Storey Hotel	20 Storey Hotel	2 Storey Office	7 Storey Office	20 Storey Office	Regional Shopping Centre	2 Storey Restaurant	Aged Care Facility
<b>Scope/Size</b>	Single level 3 bedroom ensuite house. Brick veneer with concrete slab on ground construction	21 Apartments over 3 storeys and one basement carpark	Mix of 1, 2 and 3 bed units	Mix of 1,2,3 bed units	40 rooms over 2 storeys	120 rooms	422 rooms	Floor plates of approx. 130m2	Floor plates of approx. 5,000m2	Floor plates of approx. 3,500m2	Retail space over 4 levels	Single Restaruant	Residential Care Facility.
<b>Building Area - GFA</b>	202	4,420	8,330	20,100	7,920	14,000	31,000	260	45,000	85,000	50,000	230	5,200
<b>Current Considerations</b>	None	One electrical riser per block, no TER	One electrical riser per block, 3 risers in total, no TER	One electrical riser per block, 3 risers in total, Main electrical plant room available in basement	One electrical riser per block, 2 risers in total, Main electrical plant room available in basement	One electrical riser per block, no TER	2 electrical riser servicing the floor, Main electrical plant room available in basement	None	2 electrical riser servicing the floor, Main electrical plant room available in basement	1 large Comms riser servicing the floor, Main electrical plant room available in basement	4 large Comms riser servicing the floor, Main electrical plant room available in basement	None	2 electrical riser servicing the floor, Main electrical plant room available in basement
<b>Entry Points</b>	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Telecommunications equipment room or floor distributors (m2)</b>	N/A	19	19	26	19	23	26	9	60	110	60	9	19
<b>Vertical Risers between Floors</b>	N/A	1	1	1	1	1	1	1	2	3	2	1	2
<b>Approximate PROJECT Construction Outturn Cost</b>	\$303,000	\$11,340,000	\$22,050,000	\$56,700,000	\$29,000,000	\$27,000,000	\$150,000,000	\$425,000	\$105,000,000	\$187,000,000	\$50,000,000	\$552,000	\$25,000,000
<b>A. Total Construction Cost - Current Practice</b>	\$	\$19,401	\$89,484	\$132,810	\$21,191	\$85,459	\$175,205	\$242	\$83,589	\$314,832	\$81,766	\$	\$74,092
<b>B. Total Construction Cost - Proposed</b>	\$268	\$65,094	\$194,413	\$429,140	\$101,973	\$229,833	\$515,519	\$10,474	\$134,974	\$604,383	\$149,485	\$10,104	\$92,720
<b>D-T-S Provisions</b>													
<b>C. Total Construction Cost - Proposed Provisions Retro-fit</b>	\$2,111	\$81,435	\$299,616	\$751,263	\$167,809	\$328,089	\$749,008	\$16,392	\$158,551	\$799,255	\$207,902	\$15,448	\$101,455
<b>D1. Loss of Net Lettable/Sellable Space (m2) - Proposed D-T-S Provisions</b>	0	19.90	21.40	31.70	20.80	25.70	32.60	9.60	64.20	128.00	61.20	9.60	21.40
<b>D2. Loss of Net Lettable/Sellable Space (%) - Proposed D-T-S Provisions</b>	0.0000%	0.4502%	0.2569%	0.1577%	0.2626%	0.1836%	0.1052%	3.6923%	0.1427%	0.1506%	0.1224%	4.1739%	0.4115%

**Notes:**

1. All figures exclude GST

**Glossary:**

D-T-S - Deemed-to-Satisfy  
GFA - Gross Floor Area  
NLA - Net Lettable Area  
NSA - Net Saleable Area  
TER - Telecommunications Equipment Room



## APPENDIX 2 – DETAILED BREAKUP OF ESTIMATED CONSTRUCTION COSTS

**C15048 Telecommunication Spaces+Pathways  
Estimate Summary  
10 July 2015 (Issue 4)**

	Description	Quantity	Unit	Rate	Subtotal	Factor	Total
1	Class 1a_ABCB House_CURRENT				0		
2	Class 1a_ABCB House_AS SPECIFIED				268		268
3	Class 1a_ABCB House_RETROFIT				2,111		2,111
4	Class 2_3 Storey Apartments_CURRENT				19,401		19,401
5	Class 2_3 Storey Apartments_AS SPECIFIED				65,094		65,094
6	Class 2_3 Storey Apartments_RETROFIT				81,435		81,435
7	Class 2_7 Storey Apartments_CURRENT				89,484		89,484
8	Class 2_7 Storey Apartments_AS SPECIFIED				194,413		194,413
9	Class 2_7 Storey Apartments_RETROFIT				299,616		299,616
10	Class 2_18 Storey Apartments_CURRENT				132,810		132,810
11	Class 2_18 Storey Apartments_AS SPECIFIED				429,140		429,140
12	Class 2_18 Storey Apartments_RETROFIT				751,263		751,263
13	Class 3_2 Storey Motel_CURRENT				21,191		21,191
14	Class 3_2 Storey Motel_AS SPECIFIED				101,973		101,973
15	Class 3_2 Storey Motel_RETROFIT				167,809		167,809
16	Class 3_8 Storey Hotel_CURRENT				85,459		85,459
17	Class 3_8 Storey Hotel_AS SPECIFIED				229,833		229,833
18	Class 3_8 Storey Hotel_RETROFIT				328,089		328,089
19	Class 3_20 Storey Hotel_CURRENT				175,205		175,205
20	Class 3_20 Storey Hotel_AS SPECIFIED				515,519		515,519
21	Class 3_20 Storey Hotel_RETROFIT				749,008		749,008
22	Class 5_2 Storey Office_CURRENT				242		242
23	Class 5_2 Storey Office_AS SPECIFIED				10,474		10,474
24	Class 5_2 Storey Office_RETROFIT				16,392		16,392
25	Class 5_7 Storey Office_CURRENT				83,589		83,589
26	Class 5_7 Storey Office_AS SPECIFIED				134,974		134,974
27	Class 5_7 Storey Office_RETROFIT				158,551		158,551
28	Class 5_20 Storey Office_CURRENT				314,832		314,832
29	Class 5_20 Storey Office_AS SPECIFIED				604,383		604,383
30	Class 5_20 Storey Office_RETROFIT				799,255		799,255
31	Class 6_Large Shopping Centre_CURRENT				81,766		81,766

**C15048 Telecommunication Spaces+Pathways  
Estimate Summary  
10 July 2015 (Issue 4)**

	Description	Quantity	Unit	Rate	Subtotal	Factor	Total
32	Class 6_Large Shopping Centre_AS SPECIFIED				149,485		149,485
33	Class 6_Large Shopping Centre_RETROFIT				207,902		207,902
34	Class 6_Restaraunt_CURRENT				0		
35	Class 6_Restaraunt_AS SPECIFIED				10,104		10,104
36	Class 6_Restaraunt_RETROFIT				15,448		15,448
<b>37</b>	Class 9c_Aged Care_CURRENT				74,092		74,092
<b>38</b>	Class 9c_Aged Care_AS SPECIFIED				92,720		92,720
<b>39</b>	Class 9c_Aged Care_RETROFIT				101,455		101,455

**1 Class 1a\_ABCB House\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
1.1	Single level 3 bed room ensuite brick veneer dwelling with slab on ground construction					
1.2	Current practice does not provide dedicated pathway from entry point to main switch board					
	<b>Entry Point</b>					
1.3	Dedicated Conduit from House perimeter to main switch		N/A			
	<b>Telecommunications Equipment Room</b>					
1.4	Masonry walls including painting		N/A			
1.5	Pair of doors including frame and hardware		N/A			
1.6	Lighting		N/A			
1.7	Electrical		N/A			
	<b>Vertical Risers</b>					
1.8	Masonry walls		N/A			
1.9	Access door including frame and hardware		N/A			
1.10	Sealing for fire, noise and water		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>0</b>
1.11	Preliminaries	0.12	item	0.00		0
1.12	Margin	0.08	item	0.00		0
	<b>Total Outturn Cost Cost</b>					<b>0</b>
1.13	Total Build Cost	202	m2	1,500.00	0.00	0
1.14	% of total Construction Cost	0.000				

**Class 1a\_ABCB House\_CURRENT**

**0**

**2 Class 1a\_ABCB House\_AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
2.1	Single level 3 bed room ensuite brick veneer dwelling with slab on ground construction					
	<b>Entry Point</b>					
2.2	Conduiting at perimeter installed against masonry wall or inside cavity	3	m	25.00		65
	<b>Telecommunications Equipment Room</b>		N/A			
	<b>Vertical Risers</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
2.3	Conduit to connect from external wall to a point on internal wall for termination equipment	7	m	25.00		175
	<b>Total Net Trade Cost</b>					<b>65</b>
2.4	Preliminaries	0.12	item	65.00		8
2.5	Margin	0.08	item	247.80		20
	<b>Total Outturn Cost Cost</b>					<b>268</b>

**2 Class 1a\_ABCB House\_ AS SPECIFIED**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
2.6	Total Build Cost	202	m2	1,500.00	0.00	0
2.7	% of total Construction Cost	0.001				

**Class 1a\_ABCB House\_ AS SPECIFIED**

**268**

**3 Class 1a\_ABCB House\_RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
3.1	Single level 3 bed room ensuite brick veneer dwelling with slab on ground construction					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
3.2	Access provided freely by owner/occupant					
3.3	There is ceiling space with reasonable access					
3.4	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
3.5	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
3.6	Allow demolition associated with removal of wall lining and the like	1	item	40.00		40
3.7	Conduiting at perimeter installed against masonry wall or inside cavity	3	m	30.00		90
3.8	Making good to damaged building fabric such as brick work, plastering and painting all inclusive	1	item	1,400.00		1,400
	<b>Telecommunications Equipment Room</b>		N/A			
	<b>Vertical Risers</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
3.9	Conduit to connect from external wall to a point on internal wall for termination equipment	7	m	30.00		210
	<b>Total Net Trade Cost</b>					<b>1,530</b>
3.10	Preliminaries	0.14	item	1,530.00		214
3.11	Margin	0.08	item	1,954.20		156
	<b>Total Outturn Cost Cost</b>					<b>2,111</b>
3.12	Total Build Cost	202	m2	1,500.00	0.00	0
3.13	% of total Construction Cost	0.007				

**Class 1a\_ABCB House\_RETROFIT**

**2,111**

**4 Class 2\_3 Storey Apartments\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
4.1	Sample Apartments comprises three storey buildings containing 54 apartments with one level of basement parking. The total apartment GFA of approximately 4,420m2 in a variety of layouts. The apartment is serviced by 1 elevator					
4.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
	<b>Entry Point</b>					

4	Class 2_3 Storey Apartments_ CURRENT					
	Description	Quantity	Unit	Rate	Factor	Total
4.3	Dedicated Comms trench from entry point to riser or main switch	30	m	28.50		855
4.4	Conduits from entry point to riser or main switch	30	m	25.00		750
	<b>Telecommunications Equipment Room</b>					
4.5	Does not have a dedicated room		Note			0
	<b>Vertical Risers</b>					
4.6	Masonry walls	47	m2	115.63		5,434
4.7	Access door including frame and hardware	4	no	1,850.00		7,400
4.8	Sealing for fire, noise and water	1	item	1,600.00		1,600
	<b>Telecommunications Internal Lead in Conduit</b>					
4.9	Currently not a provision, telecommunications cabling not in dedicated conduits					
	<b>Total Net Trade Cost</b>					<b>16,039</b>
4.10	Preliminaries	0.12	item	16,039.38		1,925
4.11	Margin	0.08	item	17,964.10		1,437
	<b>Total Outturn Cost Cost</b>					<b>19,401</b>
4.12	Total Build Cost	1	item	11,610,000.00	0.00	0
4.13	% of total Construction Cost	0.002				

**Class 2\_3 Storey Apartments\_ CURRENT**

**19,401**

**5 Class 2\_3 Storey Apartments\_ AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
5.1	Sample Apartments comprises three storey buildings containing 54 apartments with one level of basement parking. The total apartment GFA of approximately 4,420m2 in a variety of layouts. The apartment is serviced by 1 elevator					
5.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
5.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Entry Point</b>					
5.4	Comms trench from entry point to telecommunications room	30	m	28.50		855
5.5	Conduits from entry point to telecommunications room	30	m	25.00		750
	<b>Telecommunications Equipment Room (19m2)</b>					
5.6	Masonry walls including painting	46	m2	115.63		5,319
5.7	Pair of doors including frame and hardware	1	no	1,850.00		1,850
5.8	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
5.9	Masonry walls	47	m2	115.63		5,434

	Description	Quantity	Unit	Rate	Factor	Total
5.10	Access door including frame and hardware	4	no	1,850.00		7,400

**5 Class 2\_3 Storey Apartments\_ AS SPECIFIED**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
5.11	Sealing for fire, noise and water	1	item	1,600.00		1,600
	<b>Vertical Risers - New Dedicated</b>					
5.12	Masonry walls	0	m2	115.63		0
5.13	Access door including frame and hardware	0	no	1,850.00		0
5.14	Sealing for fire, noise and water	0	item	1,600.00		0
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
5.15	Masonry walls including painting	98	m2	115.63		11,331
5.16	Single doors including frame and hardware	3	no	1,150.00		3,450
5.17	Lighting	3	item	450.00		1,350
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
5.18	Lead in conduits from riser to individual units termination point with space for termination equipment	561	m	25.00		14,025
	<b>Total Net Trade Cost</b>					<b>53,814</b>
5.19	Preliminaries	0.12	item	53,814.38		6,458
5.20	Margin	0.08	item	60,272.10		4,822
	<b>Total Outturn Cost Cost</b>					<b>65,094</b>
5.21	Total Build Cost	1	item	11,610,000.00	0.00	0
5.22	% of total Construction Cost	0.006				

**Class 2\_3 Storey Apartments\_ AS SPECIFIED**

**65,094**

**6 Class 2\_3 Storey Apartments\_ RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
6.1	Sample Apartments comprises three storey buildings containing 54 apartments with one level of basement parking. The total apartment GFA of approximately 4,420m2 in a variety of layouts. The apartment is serviced by 1 elevator					
6.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
6.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
6.4	Access provided freely by owner/occupant					
6.5	There is ceiling space with reasonable access					
6.6	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
6.7	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
6.8	Allow for saw cutting existing concrete	90	m	25.00		2,250
6.9	Allow demolition of concrete	45	m	60.00		2,700



	Description	Quantity	Unit	Rate	Factor	Total
6.10	Comms trench from entry point to telecommunications room	45	m	60.00		2,700

6 Class2\_3 Story Apartments\_Retrofit

	Description	Quantity	Unit	Rate	Factor	Total
6.11	Conduits from entry point to telecommunications room	45	m	30.00		1,350
	<b>Telecommunications Equipment Room (19m2)</b>					
6.12	Masonry walls including painting	46	m2	173.44		7,978
6.13	Pair of doors including frame and hardware	1	no	2,300.00		2,300
6.14	Lighting	1	item	600.00		600
	<b>Vertical Risers - Existing</b>					
6.15	Masonry walls	47	m2	115.63		5,434
6.16	Access door including frame and hardware	4	no	1,850.00		7,400
6.17	Sealing for fire, noise and water	1	item	1,600.00		1,600
	<b>Vertical Risers - New</b>					
6.18	Associated demolition	0	item	3,500.00		0
6.19	Masonry walls	0	m2	115.63		0
6.20	Access door including frame and hardware	0	no	1,850.00		0
6.21	Sealing for fire, noise and water	0	item	1,600.00		0
6.22	Making good to damaged building fabric such as brick work, plastering and painting all inclusive	0	item	4,500.00		0
	<b>Telecommunications Internal Lead in Conduit</b>					
6.23	Lead in conduits from riser to individual units termination point with space for termination equipment assume installed in existing ceilings and walls	561	m	30.00		16,830
6.24	Associated builders works allowance per floor	3	no	5,000.00		15,000
	<b>Total Net Trade Cost</b>					<b>66,143</b>
6.25	Preliminaries	0.14	item	66,142.50		9,260
6.26	Margin	0.08	item	75,402.45		6,032
	<b>Total Outturn Cost Cost</b>					<b>81,435</b>
6.27	Total Build Cost	1	item	11,610,000.00	0.00	0
6.28	% of total Construction Cost	0.007				

**Class 2\_3 Storey Apartments\_ RETROFIT**

**81,435**

7 **Class 2\_7 Storey Apartments\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
7.1	Sample Apartments comprises seven storey buildings containing 98 apartments with three level of basement parking. The total apartment GFA of approximately 8,330m2 in a variety of layouts. The apartment is serviced by 3 elevators					
7.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
	<b>Entry Point</b>					
7.3	Sufficient entry point is currently provided from boundry to the main switch room		Note			
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					

**Class 2\_7 Storey Apartments\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
7.4	Masonry walls including painting	152	m2	115.63		17,575
7.5	Pair of doors including frame and hardware	2	no	1,850.00		3,700
7.6	Lighting	1	item	1,000.00		1,000
	<b>Vertical Risers</b>					
7.7	Masonry walls	93	m2	115.63		10,753
7.8	Access door including frame and hardware	21	no	1,550.00		32,550
7.9	Sealing for fire, noise and water	1	item	8,400.00		8,400
	<b>Telecommunications Internal Lead in Conduit</b>					
7.10	Currently not a provision, telecommunications cabling not in dedicated conduits					0
	<b>Total Net Trade Cost</b>					<b>73,978</b>
7.11	Preliminaries	0.12	item	73,978.13		8,877
7.12	Margin	0.08	item	82,855.50		6,628
	<b>Total Outturn Cost Cost</b>					<b>89,484</b>
7.13	Total Build Cost	1	item	22,050,000.00	0.00	0
7.14	% of total Construction Cost	0.004				

**Class 2\_7 Storey Apartments\_CURRENT**

**89,484**

**8 Class 2\_7 Storey Apartments\_AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
8.1	Sample Apartments comprises seven storey buildings containing 98 apartments with three level of basement parking. The total apartment GFA of approximately 8,330m2 in a variety of layouts. The apartment is serviced by 3 elevators					
8.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
8.3	Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 19m2					
	<b>Entry Point</b>					
8.4	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
8.5	Conduits from entry point to telecommunications room	50	m	25.00		1,250
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
8.6	Masonry walls including painting	152	m2	115.63		17,575
8.7	Pair of doors including frame and hardware	2	no	1,850.00		3,700
8.8	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (19m2) - Dedicated</b>					
8.9	Masonry walls including painting	0	m2	115.63		0
8.10	Pair of doors including frame and hardware	0	no	1,850.00		0
8.11	Lighting	0	item	450.00		0

**8 Class 2\_7 Storey Apartments\_AS SPECIFIED (Continued)**

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Vertical Risers - Existing</b>					
8.12	Masonry walls	93	m2	115.63		10,753
8.13	Access door including frame and hardware	21	no	1,550.00		32,550
8.14	Sealing for fire, noise and water	1	Item	8,400.00		8,400
8.15	Masonry walls	0	m2	115.63		0
8.16	Access door including frame and hardware	0	no	1,200.00		0
8.17	Sealing for fire, noise and water	0	item	8,400.00		0
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
8.18	Masonry walls including painting	227	m2	115.63		26,247
8.19	Single doors including frame and hardware	7	no	1,150.00		8,050
8.20	Lighting	7	item	450.00		3,150
8.21	Lead in conduits from riser to individual units termination point with space for termination equipment	1,865	m	25.00		46,625
	<b>Total Net Trade Cost</b>					160,725
8.22	Preliminaries	0.12	item	160,725.00		19,287
8.23	Margin	0.08	item	180,012.00		14,401
8.24	Total Build Cost					
		1	item	22,050,000.00	0.00	0
8.25	% of total Construction Cost	0.009				

**194,413**

**9 Class 2\_7 Storey Apartments\_RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
9.1	Sample Apartments comprises seven storey buildings containing 98 apartments with three level of basement parking. The total apartment GFA of approximately 8,330m2 in a variety of layouts. The apartment is serviced by 3 elevators					
9.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
9.3	Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 19m2					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
9.4	Access provided freely by owner/occupant					
9.5	There is ceiling space with reasonable access					
9.6	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
9.7	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					

9 Class 2\_ & Storey Apartments\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
9.8	Allow for saw cutting existing concrete	100	m	25.00		2,500
9.9	Allow demolition of concrete	50	m	60.00		3,000
9.10	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
9.11	Conduits from entry point to telecommunications room	50	m	30.00		1,500
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
9.12	Masonry walls including painting	152	m2	115.63		17,575
9.13	Pair of doors including frame and hardware	2	no	1,850.00		3,700
9.14	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (19m2) - Dedicated</b>					
9.15	Masonry walls including painting	0	m2	173.44		0
9.16	Pair of doors including frame and hardware	0	no	2,300.00		0
9.17	Lighting	0	item	600.00		0
	<b>Vertical Risers - Existing</b>					
9.18	Masonry walls	93	m2	115.63		10,753
9.19	Access door including frame and hardware	21	no	1,550.00		32,550
9.20	Sealing for fire, noise and water	1	item	8,400.00		8,400
	<b>Vertical Risers - New</b>					
9.21	Associated demolition	0	item	3,500.00		0
9.22	Masonry walls	0	m2	173.44		0
9.23	Access door including frame and hardware	0	no	1,200.00		0
9.24	Sealing for fire, noise and water	0	item	8,400.00		0
9.25	Making good to damaged building fabric including plastering and painting		item	4,500.00		0
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
9.26	Lead in conduits from riser to individual units termination point with space for termination equipment	1,865	m	30.00		55,950
9.27	Associated builders works allowance per floor	21	no	5,000.00		105,000
	<b>Total Net Trade Cost</b>					<b>243,353</b>
9.28	Preliminaries	0.14	item	243,353.13		34,069
9.29	Margin	0.08	item	277,422.56		22,194
	<b>Total Outturn Cost Cost</b>					<b>299,616</b>
9.30	Total Build Cost	1	item	22,050,000.00	0.00	0
9.31	% of total Construction Cost	0.014				

**Class 2\_7 Storey Apartments\_RETROFIT**

**299,616**

10 Class 2\_18 Storey Apartments\_CURRENT

	Description	Quantity	Unit	Rate	Factor	Total
10.1	Sample Apartments comprises 18 storey building containing 252 apartments with three level of basement parking. The total apartment GFA of approximately 20,100m2 in a variety of layouts. The apartment is serviced by 4 elevators					

**10 Class 2\_18 Storey Apartments\_CURRENT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
10.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
	<b>Entry Point</b>					
10.3	The SOU is currently served by necessary wiring been provided to distribution board		Note			
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
10.4	Masonry walls including painting	152	m2	115.63		17,575
10.5	Pair of doors including frame and hardware	2	no	1,850.00		3,700
10.6	Lighting	1	item	1,000.00		1,000
	<b>Vertical Risers</b>					
10.7	Masonry walls	219	m2	115.63		25,322
10.8	Access door including frame and hardware	36	no	1,550.00		55,800
10.9	Sealing for fire, noise and water	1	item	6,400.00		6,400
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
10.10	Currently not a provision, telecommunications cabling not in dedicated conduits					0
	<b>Total Net Trade Cost</b>					<b>109,797</b>
10.11	Preliminaries	0.12	item	109,796.88		13,176
10.12	Margin	0.08	item	122,972.50		9,838
	<b>Total Outturn Cost Cost</b>					<b>132,810</b>
10.13	Total Build Cost	1	item	56,700,000.00	0.00	0
10.14	% of total Construction Cost	0.002				

**Class 2\_18 Storey Apartments\_CURRENT**

**132,810**

**11 Class 2\_18 Storey Apartments\_AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
11.1	Sample Apartments comprises 18 storey building containing 252 apartments with three level of basement parking. The total apartment GFA of approximately 20,100m2 in a variety of layouts. The apartment is serviced by 4 elevators					
11.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
11.3	Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 10m2					
	<b>Entry Point</b>					
11.4	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
11.5	Conduits from entry point to telecommunications room	50	m	25.00		1,250

	Description	Quantity	Unit	Rate	Factor	Total
	Telecommunications Equipment Room - Currently in Main switchboard room					

11 Class 2\_18 Storey Apartments\_AS SPECIFIED

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
11.6	Masonry walls including painting	152	m2	115.63		17,575
11.7	Pair of doors including frame and hardware	2	no	1,850.00		3,700
11.8	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (Shared)</b>					
11.9	Masonry walls including painting	44	m2	115.63		5,088
11.10	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
11.11	Masonry walls	219	m2	115.63		25,322
11.12	Access door including frame and hardware	36	no	1,550.00		55,800
11.13	Sealing for fire, noise and water	1	item	6,400.00		6,400
	<b>Vertical Risers - New Dedicated</b>					
11.14	Masonry walls	110	m2	115.63		12,719
11.15	Access door including frame and hardware	36	no	1,200.00		43,200
11.16	Sealing for fire, noise and water	1	item	6,400.00		6,400
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
11.17	Masonry walls including painting	584	m2	115.63		67,525
11.18	Single doors including frame and hardware	18	no	1,150.00		20,700
11.19	Lighting	18	item	450.00		8,100
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
11.20	Lead in conduits from riser to individual units termination point with space for termination equipment	3,125	m	25.00		78,125
	<b>Total Net Trade Cost</b>					<b>354,778</b>
11.21	Preliminaries	0.12	item	354,778.13		42,573
11.22	Margin	0.08	item	397,351.50		31,788
	<b>Total Outturn Cost Cost</b>					<b>429,140</b>
11.23	Total Build Cost	1	item	56,700,000.00	0.00	0
11.24	% of total Construction Cost	0.008				

**Class 2\_18 Storey Apartments\_AS SPECIFIED**

**429,140**

12 Class 2\_18 Storey Apartments\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
12.1	Sample Apartments comprises 18 storey building containing 252 apartments with three level of basement parking. The total apartment GFA of approximately 20,100m2 in a variety of layouts. The apartment is serviced by 4 elevators					
12.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
12.3	Access provided freely by owner/occupant					



	Description	Quantity	Unit	Rate	Factor	Total
12.4	There is ceiling space with reasonable access					

**12 Class 2\_18 Storey Apartments\_RETROFIT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
12.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
12.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
12.7	Allow for saw cutting existing concrete	100	m	25.00		2,500
12.8	Allow demolition of concrete	50	m	60.00		3,000
12.9	Dedicated Comms trench from entry point to telecommunications room	50	m	28.50		1,425
12.10	Conduits from entry point to telecommunications room	50	m	30.00		1,500
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
12.11	Masonry walls including painting	152	m2	115.63		17,575
12.12	Pair of doors including frame and hardware	2	no	1,850.00		3,700
12.13	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (Shared)</b>					
12.14	Masonry walls including painting	44	m2	115.63		5,088
12.15	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
12.16	Masonry walls	219	m2	115.63		25,322
12.17	Access door including frame and hardware	36	no	1,550.00		55,800
12.18	Sealing for fire, noise and water	1	item	6,400.00		6,400
	<b>Vertical Risers - New Dedicated</b>					
12.19	Associated demolition	18	item	3,500.00		63,000
12.20	Masonry walls	110	m2	173.44		19,078
12.21	Access door including frame and hardware	36	no	1,200.00		43,200
12.22	Sealing for fire, noise and water	1	item	6,400.00		6,400
12.23	Making good to damaged building fabric including plastering and painting	18	item	4,500.00		81,000
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
12.24	Lead in conduits from riser to individual units termination point with space for termination equipment	3,125	m	30.00		93,750
12.25	Associated builders works allowance per floor	36	no	5,000.00		180,000
	<b>Total Net Trade Cost</b>					<b>610,188</b>
12.26	Preliminaries	0.14	item	610,187.50		85,426
12.27	Margin	0.08	item	695,613.75		55,649
	<b>Total Outturn Cost Cost</b>					<b>751,263</b>
12.28	Total Build Cost	1	item	56,700,000.00	0.00	0
12.29	% of total Construction Cost	0.013				

**Class 2\_18 Storey Apartments\_RETROFIT**

**751,263**

**13 Class 3\_2 Storey Motel\_CURRENT**



13 Class 3\_2 Storey Motel\_CURRENT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
13.1	The selected sample is a 3 level local hotel/motel to approximately 4 stars, it consist of 85 SoUs with retail, some commercial and restaurants on the ground floor and serviced hotel rooms over 2 level above. Total GFA is approx 7,920m2					
13.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels					
	<b>Entry Point</b>					
13.3	Comms trench from entry point to riser or main switch	50	m	28.50		1,425
13.4	Conduits from entry point to riser or main switch	50	m	25.00		1,250
	<b>Telecommunications Equipment Room</b>					
13.5	Does not have a dedicated room					0
	<b>Vertical Risers</b>					
13.6	Masonry walls	70	m2	115.63		8,094
13.7	Access door including frame and hardware	3	no	1,850.00		5,550
13.8	Sealing for fire, noise and water	1	item	1,200.00		1,200
	<b>Telecommunications Internal Lead in Conduit</b>					
13.9	Currently not a provision, telecommunications cabling not in dedicated conduits					0
	<b>Total Net Trade Cost</b>					<b>17,519</b>
13.10	Preliminaries	0.12	item	17,518.75		2,102
13.11	Margin	0.08	item	19,621.00		1,570
	<b>Total Outturn Cost Cost</b>					<b>21,191</b>
13.12	Total Build Cost	1	item	29,000,000.00	0.00	0
13.13	% of total Construction Cost	0.001				

**Class 3\_2 Storey Motel\_CURRENT**

**21,191**

14 Class 3\_2 Storey Motel\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
14.1	The selected sample is a 3 level local hotel/motel to approximately 4 stars, it consist of 85 SoUs with retail, some commercial and restaurants on the ground floor and serviced hotel rooms over 2 level above. Total GFA is approx 7,920m2					
14.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels					
	<b>Entry Point</b>					
14.3	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
14.4	Conduits from entry point to telecommunications room	50	m	25.00		1,250
	<b>Telecommunications Equipment Room</b>					
14.5	No dedicated room		Note			
	<b>Telecommunications Equipment Room (19m2) - Dedicated</b>					
14.6	Masonry walls including painting	46	m2	115.63		5,319

	Description	Quantity	Unit	Rate	Factor	Total
14.7	Pair of doors including frame and hardware	1	no	1,850.00		1,850

14 Class 3\_2 Storey Motel\_AS SPECIFIED

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
14.8	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
14.9	Masonry walls	70	m2	115.63		8,094
14.10	Access door including frame and hardware	6	no	1,550.00		9,300
14.11	Sealing for fire, noise and water	1	item	2,400.00		2,400
	<b>Vertical Risers - New Dedicated</b>					
14.12	Masonry walls	0	m2	115.63		0
14.13	Access door including frame and hardware	0	no	1,200.00		0
14.14	Sealing for fire, noise and water	0	item	2,400.00		0
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
14.15	Masonry walls including painting	65	m2	115.63		7,516
14.16	Single doors including frame and hardware	2	no	1,150.00		2,300
14.17	Lighting	2	item	450.00		900
	<b>Telecommunications Internal Lead in Conduit</b>					
14.18	Lead in conduits from riser to individual units termination point with space for termination equipment	1,740	m	25.00		43,500
	<b>Total Net Trade Cost</b>					<b>84,303</b>
14.19	Preliminaries	0.12	item	84,303.13		10,116
14.20	Margin	0.08	item	94,419.50		7,554
	<b>Total Outturn Cost Cost</b>					<b>101,973</b>
14.21	Total Build Cost	1	item	29,000,000.00	0.00	0
14.22	% of total Construction Cost	0.004				

**Class 3\_2 Storey Motel\_AS SPECIFIED**

**101,973**

15 Class 3\_2 Storey Motel\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
15.1	The selected sample is a 3 level local hotel/motel to approximately 4 stars, it consist of 85 SoUs with retail, some commercial and restaurants on the ground floor and serviced hotel rooms over 2 level above. Total GFA is approx 7,920m2					
15.2	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
15.3	Access provided freely by owner/occupant					
15.4	There is ceiling space with reasonable access					
15.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
15.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
15.7	Allow for saw cutting existing concrete	100	m	25.00		2,500

15 Class 3\_2 Storey Motel\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
15.8	Allow demolition of concrete	50	m	60.00		3,000
15.9	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
15.10	Conduits from entry point to telecommunications room	50	m	30.00		1,500
	<b>Telecommunications Equipment Room</b>					
15.11	No dedicated room		Note			
	<b>Telecommunications Equipment Room (19m2) - Dedicated</b>					
15.12	Masonry walls including painting	46	m2	173.44		7,978
15.13	Pair of doors including frame and hardware	1	no	2,300.00		2,300
15.14	Lighting	1	item	600.00		600
	<b>Vertical Risers - Existing</b>					
15.15	Masonry walls	70	m2	115.63		8,094
15.16	Access door including frame and hardware	6	no	1,550.00		9,300
15.17	Sealing for fire, noise and water	1	item	2,400.00		2,400
	<b>Vertical Risers - New</b>					
15.18	Associated demo	0	item	9,000.00		0
15.19	Masonry walls	0	m2	173.44		0
15.20	Access door including frame and hardware	0	no	2,300.00		0
15.21	Sealing for fire, noise and water	0	item	2,400.00		0
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
15.22	Lead in conduits from riser to individual units termination point with space for termination equipment	1,740	m	30.00		52,200
15.23	Associated builders works allowance per floor	6	no	7,500.00		45,000
	<b>Total Net Trade Cost</b>					<b>136,297</b>
15.24	Preliminaries	0.14	item	136,296.88		19,082
15.25	Margin	0.08	item	155,378.44		12,430
	<b>Total Outturn Cost Cost</b>					<b>167,809</b>
15.26	Total Build Cost	1	item	29,000,000.00	0.00	0
15.27	% of total Construction Cost	0.006				

**Class 3\_2 Storey Motel\_RETROFIT**

**167,809**

16 Class 3\_8 Storey Hotel\_CURRENT

	Description	Quantity	Unit	Rate	Factor	Total
16.1	The selected sample is a 8 level 'budget luxury' hotel, it consist of 120 SoUs as well as retail, commercial and restaurants on the ground floor. Total GFA is approx 14,000m2					
16.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
16.3	Comms trench from entry point to telecommunications room	40	m	28.50		1,140

	Description	Quantity	Unit	Rate	Factor	Total
16.4	Conduits from entry point to telecommunications room	40	m	25.00		1,000



16 Class 3\_8 Storey Hotel\_CURRENT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
16.5	Masonry walls including painting	137	m2	115.63		15,841
16.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
16.7	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room - Dedicated</b>		N/A			
	<b>Vertical Risers - Existing</b>					
16.8	Precast concrete walls	104	m2	280.00		29,120
16.9	Access door including frame and hardware	9	no	1,550.00		13,950
16.10	Sealing for fire, noise and water	1	item	3,600.00		3,600
	<b>Vertical Risers - New Dedicated</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>					
16.11	Currently not a provision, telecommunications cabling not in dedicated conduits					
	<b>Total Net Trade Cost</b>					<b>70,651</b>
16.12	Preliminaries	0.12	item	70,650.63		8,478
16.13	Margin	0.08	item	79,128.70		6,330
	<b>Total Outturn Cost Cost</b>					<b>85,459</b>
16.14	Total Build Cost	1	item	27,000,000.00	0.00	0
16.15	% of total Construction Cost	0.0032				

**Class 3\_8 Storey Hotel\_CURRENT**

**85,459**

17 Class 3\_8 Storey Hotel\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
17.1	The selected sample is a 8 level 'budget luxury' hotel, it consist of 120 SoUs as well as retail, commercial and restaurants on the ground floor. Total GFA is approx 14,000m2					
17.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
17.3	Comms trench from entry point to telecommunications room	40	m	28.50		1,140
17.4	Conduits from entry point to telecommunications room	40	m	25.00		1,000
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
17.5	Masonry walls including painting	137	m2	115.63		15,841
17.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
17.7	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (26m2) - Dedicated</b>					
17.8	Masonry walls including painting	55	m2	115.63		6,359
17.9	Pair of doors including frame and hardware	1	no	1,850.00		1,850

	Description	Quantity	Unit	Rate	Factor	Total
17.10	Lighting	1	item	450.00		450

17 Class 3\_8 Storey Hotel\_AS SPECIFIED

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Vertical Risers - Existing</b>					
17.11	Precast concrete walls	104	m2	280.00		29,120
17.12	Access door including frame and hardware	9	no	1,550.00		13,950
17.13	Sealing for fire, noise and water	1	item	3,600.00		3,600
	<b>Vertical Risers - New Dedicated</b>					
17.14	Precast concrete walls	52	m2	280.00		14,560
17.15	Access door including frame and hardware	9	no	1,200.00		10,800
17.16	Sealing for fire, noise and water	1	item	3,600.00		3,600
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
17.17	Masonry walls including painting	260	m2	115.63		30,063
17.18	Single doors including frame and hardware	8	no	1,150.00		9,200
17.19	Lighting	8	item	450.00		3,600
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
17.20	Lead in conduits from riser to individual units termination point with space for termination equipment	1,555	m	25.00		38,875
	<b>Total Net Trade Cost</b>					<b>190,008</b>
17.21	Preliminaries	0.12	item	190,007.50		22,801
17.22	Margin	0.08	item	212,808.40		17,025
	<b>Total Outturn Cost Cost</b>					<b>229,833</b>
17.23	Total Build Cost	1	item	27,000,000.00	0.00	0
17.24	% of total Construction Cost	0.009				

**Class 3\_8 Storey Hotel\_AS SPECIFIED**

**229,833**

18 Class 3\_8 Storey Hotel\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
18.1	The selected sample is a 8 level 'budget luxury' hotel, it consist of 120 SoUs as well as retail, commercial and restaurants on the ground floor. Total GFA is approx 14,000m2					
18.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
18.3	Access provided freely by owner/occupant					
18.4	There is ceiling space with reasonable access					
18.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
18.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
18.7	Allow for saw cutting existing concrete	80	m	25.00		2,000
18.8	Allow demolition of concrete	40	m	60.00		2,400

	Description	Quantity	Unit	Rate	Factor	Total
18.9	Comms trench from entry point to telecommunications room	40	m	28.50		1,140

18 Class 3\_8 Storey Hotel\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
18.10	Conduits from entry point to telecommunications room	40	m	30.00		1,200
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
18.11	Masonry walls including painting	137	m2	115.63		15,841
18.12	Pair of doors including frame and hardware	2	no	2,500.00		5,000
18.13	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (26m2) - Dedicated</b>					
18.14	Masonry walls including painting	55	m2	115.63		6,359
18.15	Pair of doors including frame and hardware	1	no	1,850.00		1,850
18.16	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
18.17	Precast Concrete walls	104	m2	280.00		29,120
18.18	Access door including frame and hardware	9	no	1,550.00		13,950
18.19	Sealing for fire, noise and water	1	item	3,600.00		3,600
	<b>Vertical Risers - New Dedicated</b>					
18.20	Associated demo	1	item	13,500.00		13,500
18.21	Masonry walls	52	m2	173.44		9,019
18.22	Access door including frame and hardware	9	no	1,200.00		10,800
18.23	Sealing for fire, noise and water	1	item	3,600.00		3,600
18.24	Assumed make good costs	9	item	5,000.00		45,000
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
18.25	Lead in conduits from riser to individual units termination point with space for termination equipment	1,555	m	30.00		46,650
18.26	Associated builders works allowance per floor	9	no	6,000.00		54,000
	<b>Total Net Trade Cost</b>					<b>266,479</b>
18.27	Preliminaries	0.14	item	266,478.75		37,307
18.28	Margin	0.08	item	303,785.78		24,303
	<b>Total Outturn Cost Cost</b>					<b>328,089</b>
18.29	Total Build Cost	1	item	27,000,000.00	0.00	0
18.30	% of total Construction Cost	0.012				

**Class 3\_8 Storey Hotel\_RETROFIT**

**328,089**

19 Class 3\_20 Storey Hotel\_CURRENT

	Description	Quantity	Unit	Rate	Factor	Total
19.1	The selected sample is a 20 level 5 star hotel, it consist of 422 SoUs featuring 364 rooms, 26 suites and 32 apartments, with retail, commercial and restaurants on the ground floor and serviced hotel rooms over from level 4 and over. Total GFA is approx 31,000m2					
19.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels. The building includes 6 elevators					

19 Class 3\_20 Storey Hotel\_CURRENT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Entry Point</b>					
19.3	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
19.4	Conduits from entry point to telecommunications room	75	m	25.00		1,875
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
19.5	Masonry walls including painting	180	m2	115.63		20,813
19.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
19.7	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room - Dedicated</b>		N/A			
	<b>Vertical Risers - Existing</b>					
19.8	Concrete walls	254	m2	280.00		71,120
19.9	Access door including frame and hardware	22	no	1,550.00		34,100
19.10	Sealing for fire, noise and water	1	item	8,800.00		8,800
	<b>Vertical Risers - New Dedicated</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>					
19.11	Currently not a provision, telecommunications cabling not in dedicated conduits					
	<b>Total Net Trade Cost</b>					<b>144,845</b>
19.12	Preliminaries	0.12	item	144,845.00		17,381
19.13	Margin	0.08	item	162,226.40		12,978
	<b>Total Outturn Cost Cost</b>					<b>175,205</b>
19.14	Total Build Cost	1	item	150,000.00 0.00	0.00	0
19.15	% of total Construction Cost	0.0012				

**Class 3\_20 Storey Hotel\_CURRENT**

**175,205**

20 Class 3\_20 Storey Hotel\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
20.1	The selected sample is a 20 level 5 star hotel, it consist of 422 SoUs featuring 364 rooms, 26 suites and 32 apartments, with retail, commercial and restaurants on the ground floor and serviced hotel rooms over from level 4 and over. Total GFA is approx 31,000m2					
20.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels					
	<b>Entry Point</b>					
20.3	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
20.4	Conduits from entry point to telecommunications room	75	m	25.00		1,875
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
20.5	Masonry walls including painting	180	m2	115.63		20,813
20.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
20.7	Lighting	1	item	1,000.00		1,000

20 Class 3 20 Storey Hotel\_ AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Telecommunications Equipment Room (26m2) - Dedicated</b>					
20.8	Masonry walls including painting	55	m2	115.63		6,359
20.9	Pair of doors including frame and hardware	1	no	1,850.00		1,850
20.10	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
20.11	Concrete walls	254	m2	280.00		71,120
20.12	Access door including frame and hardware	22	no	1,550.00		34,100
20.13	Sealing for fire, noise and water	1	item	8,800.00		8,800
	<b>Vertical Risers - New Dedicated</b>					
20.14	Concrete walls	127	m2	280.00		35,560
20.15	Access door including frame and hardware	22	no	1,200.00		26,400
20.16	Sealing for fire, noise and water	1	item	8,800.00		8,800
	<b>Telecommunications Spaces Floor Distributor (9m2)</b>					
20.17	Masonry walls including painting	648	m2	115.63		74,925
20.18	Single doors including frame and hardware	20	no	1,150.00		23,000
20.19	Lighting	20	item	450.00		9,000
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
20.20	Lead in conduits from riser to individual units termination point with space for termination equipment	3,800	m	25.00		95,000
	<b>Total Net Trade Cost</b>					<b>426,189</b>
20.21	Preliminaries	0.12	item	426,189.38		51,143
20.22	Margin	0.08	item	477,332.10		38,187
	<b>Total Outturn Cost Cost</b>					<b>515,519</b>
20.23	Total Build Cost	1	item	150,000.00 0.00	0.00	0
20.24	% of total Construction Cost	0.003				

**Class 3\_20 Storey Hotel\_ AS SPECIFIED**

**515,519**

21 **Class 3\_20 Storey Hotel\_ RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
21.1	The selected sample is a 20 level 5 star hotel, it consist of 422 SoUs featuring 364 rooms, 26 suites and 32 apartments, with retail, commercial and restaurants on the ground floor and serviced hotel rooms over from level 4 and over. Total GFA is approx 31,000m2					
21.2	The construction consist of post tensioned insitu structural slab with precast external wall construction mainly. Internal party walls consist of precast concrete walls with plasterboard lining over furring channels					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
21.3	Access provided freely by owner/occupant					
21.4	There is ceiling space with reasonable access					
21.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					

21 Class 3\_20 Storey Hotel\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
21.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
21.7	Allow for saw cutting existing concrete	150	m	25.00		3,750
21.8	Allow demolition of concrete	75	m	60.00		4,500
21.9	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
21.10	Conduits from entry point to telecommunications room	75	m	30.00		2,250
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
21.11	Masonry walls including painting	180	m2	115.63		20,813
21.12	Pair of doors including frame and hardware	2	no	2,500.00		5,000
21.13	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (26m2) - Dedicated</b>					
21.14	Masonry walls including painting	55	m2	115.63		6,359
21.15	Pair of doors including frame and hardware	1	no	1,850.00		1,850
21.16	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
21.17	Precast concrete walls	254	m2	280.00		71,120
21.18	Access door including frame and hardware	22	no	1,550.00		34,100
21.19	Sealing for fire, noise and water	1	item	8,800.00		8,800
	<b>Vertical Risers - New Dedicated</b>					
21.20	Associated demo	1	item	33,000.00		33,000
21.21	Masonry walls	127	m2	173.44		22,027
21.22	Access door including frame and hardware	22	no	1,200.00		26,400
21.23	Sealing for fire, noise and water	1	item	8,800.00		8,800
21.24	Assumed make good costs	22	item	5,000.00		110,000
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
21.25	Lead in conduits from riser to individual units termination point with space for termination equipment	3,800	m	30.00		114,000
21.26	Associated builders works allowance per floor	22	no	6,000.00		132,000
	<b>Total Net Trade Cost</b>					<b>608,356</b>
21.27	Preliminaries	0.14	item	608,355.94		85,170
21.28	Margin	0.08	item	693,525.77		55,482
	<b>Total Outturn Cost Cost</b>					<b>749,008</b>
21.29	Total Build Cost	1	item	150,000.00 0.00	0.00	0
21.30	% of total Construction Cost	0.005				

**Class 3\_20 Storey Hotel\_RETROFIT**

**749,008**

22 Class 5\_2 Storey Office\_CURRENT





**22 Class 5\_2 Storey Office\_CURRENT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
22.1	Two level commercial office development consisting of GFA 260m2					
22.2	The construction consist of precast beam and flooring structural slab with masonry and shop front external wall construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
22.3	Conduit from building perimeter to main switch	8	m	25.00		200
	<b>Telecommunications Equipment Room</b>					
22.4	Masonry walls including painting		N/A			
22.5	Pair of doors including frame and hardware		N/A			
22.6	Lighting		N/A			
22.7	Electrical		N/A			
	<b>Vertical Risers</b>					
22.8	Masonry walls		N/A			
22.9	Access door including frame and hardware		N/A			
22.10	Sealing for fire, noise and water		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>200</b>
22.11	Preliminaries	0.12	item	200.00		24
22.12	Margin	0.08	item	224.00		18
	<b>Total Outturn Cost Cost</b>					<b>242</b>
22.13	Total Build Cost	230	m2	1,850.00	0.00	0
22.14	% of total Construction Cost	0.001				

**Class 5\_2 Storey Office\_CURRENT**

**242**

**23 Class 5\_2 Storey Office\_AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
23.1	Two level commercial office development consisting of GFA 260m2					
23.2	The construction consist of precast beam and flooring structural slab with masonry and shop front external wall construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
23.3	Conduit from building perimeter to main switch	10	m	25.00		250
	<b>Telecommunications Equipment Room (9m2) - Dedicated</b>					
23.4	Masonry walls including painting	33	m2	115.63		3,816
23.5	Pair of doors including frame and hardware	1	no	1,850.00		1,850
23.6	Lighting	1	item	450.00		450
	<b>Vertical Risers</b>					
23.7	Masonry walls	6	m2	115.63		694
23.8	Access door including frame and hardware	1	no	1,200.00		1,200
23.9	Sealing for fire, noise and water	1	item	400.00		400

	Description	Quantity	Unit	Rate	Factor	Total
	Telecommunications Internal Lead in Conduit		N/A			

23 Class 5\_2 Storey Office\_AS SPECIFIED

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Total Net Trade Cost</b>					<b>8,659</b>
23.10	Preliminaries	0.12	item	8,659.38		1,039
23.11	Margin	0.08	item	9,698.50		776
	<b>Total Outturn Cost Cost</b>					<b>10,474</b>
23.12	Total Build Cost	230	m2	1,850.00	0.00	0
23.13	% of total Construction Cost	0.025				

**Class 5\_2 Storey Office\_AS SPECIFIED**

**10,474**

24 Class 5\_2 Storey Office\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
24.1	Two level commercial office development consisting of GFA 260m2					
24.2	The construction consist of precast beam and flooring structural slab with masonry and shop front external wall construction mainly. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
24.3	Access provided freely by owner/occupant					
24.4	There is ceiling space with reasonable access					
24.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
24.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
24.7	Allow for saw cutting existing concrete	20	m	25.00		500
24.8	Allow demolition of concrete	10	m	60.00		600
24.9	Conduit from building perimeter to main switch	10	m	30.00		300
	<b>Telecommunications Equipment Room (9m2) - Dedicated</b>					
24.10	Masonry walls including painting	33	m2	173.44		5,723
24.11	Pair of doors including frame and hardware	1	no	1,850.00		1,850
24.12	Lighting	1	item	450.00		450
	<b>Vertical Risers</b>					
24.13	Associated demolition	1	item	750.00		750
24.14	Masonry walls	6	m2	173.44		1,041
24.15	Access door including frame and hardware	1	no	1,200.00		1,200
24.16	Sealing for fire, noise and water	1	item	400.00		400
24.17	Assumed make good costs	1	item	500.00		500
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>13,314</b>
24.18	Preliminaries	0.14	item	13,314.06		1,864
24.19	Margin	0.08	item	15,178.03		1,214
	<b>Total Outturn Cost Cost</b>					<b>16,392</b>

	Description	Quantity	Unit	Rate	Factor	Total

**24 Class 5\_2 Storey Office\_RETROFIT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
24.20	Total Build Cost	230	m2	1,850.00	0.00	0
24.21	% of total Construction Cost	0.039				

**Class 5\_2 Storey Office\_RETROFIT**

**16,392**

**25 Class 5\_7 Storey Office\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
25.1	The selected sample is a 6 level A Grade commercial office building. Total GFA is approx 45,000m2					
25.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
25.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Entry Point</b>					
25.4	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
25.5	Conduits from entry point to telecommunications room	75	m	25.00		1,875
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
25.6	Masonry walls including painting	180	m2	115.63		20,813
25.7	Pair of doors including frame and hardware	2	no	2,500.00		5,000
25.8	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room - Dedicated</b>		N/A			
	<b>Vertical Risers - Existing</b>					
25.9	Concrete walls	81	m2	280.00		22,680
25.10	Access door including frame and hardware	8	no	1,550.00		12,400
25.11	Sealing for fire, noise and water	1	item	3,200.00		3,200
	<b>Vertical Risers - New Dedicated</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		Note			
	<b>Total Net Trade Cost</b>					<b>69,105</b>
25.12	Preliminaries	0.12	item	69,105.00		8,293
25.13	Margin	0.08	item	77,397.60		6,192
	<b>Total Outturn Cost Cost</b>					<b>83,589</b>
25.14	Total Build Cost	1	item	105,000.00 0.00	0.00	0
25.15	% of total Construction Cost	0.0008				

**Class 5\_7 Storey Office\_CURRENT**

**83,589**

**26 Class 5\_7 Storey Office\_AS SPECIFIED**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
26.1	The selected sample is a 6 level A Grade commercial office building. Total GFA is approx 45,000m2					
26.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
26.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Entry Point</b>					
26.4	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
26.5	Conduits from entry point to telecommunications room	75	m	25.00		1,875
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
26.6	Masonry walls including painting	180	m2	115.63		20,813
26.7	Pair of doors including frame and hardware	2	no	2,500.00		5,000
26.8	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (60m2) - Dedicated</b>					
26.9	Masonry walls including painting	105	m2	115.63		12,141
26.10	Pair of doors including frame and hardware	1	no	1,850.00		1,850
26.11	Lighting	1	item	450.00		450
	<b>Vertical Risers - Existing</b>					
26.12	Concrete walls	139	m2	280.00		38,920
26.13	Access door including frame and hardware	12	no	1,550.00		18,600
26.14	Sealing for fire, noise and water	1	item	8,800.00		8,800
	<b>Vertical Risers - New Dedicated</b>					
26.15	Concrete walls	0	m2	280.00		0
26.16	Access door including frame and hardware	0	no	1,200.00		0
26.17	Sealing for fire, noise and water	0	item	4,800.00		0
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		N/A			
26.18	Lead in conduits from riser to individual tenancy termination point with space for termination equipment		NA			0
	<b>Total Net Trade Cost</b>					<b>111,586</b>
26.19	Preliminaries	0.12	item	111,585.63		13,390
26.20	Margin	0.08	item	124,975.90		9,998
	<b>Total Outturn Cost Cost</b>					<b>134,974</b>
26.21	Total Build Cost	1	item	105,000.00 0.00	0.00	0
26.22	% of total Construction Cost	0.001				

**Class 5\_7 Storey Office\_AS SPECIFIED**

**134,974**

**27 Class 5\_7 Storey Office\_RETROFIT**

27 Class 5\_7 Storey Office\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
27.1	The selected sample is a 6 level A Grade commercial office building. Total GFA is approx 45,000m2					
27.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
27.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
27.4	Access provided freely by owner/occupant					
27.5	There is ceiling space with reasonable access					
27.6	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
27.7	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
27.8	Allow for saw cutting existing concrete	150	m	25.00		3,750
27.9	Allow demolition of concrete	75	m	60.00		4,500
27.10	Comms trench from entry point to telecommunications room	75	m	28.50		2,138
27.11	Conduits from entry point to telecommunications room	75	m	30.00		2,250
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
27.12	Masonry walls including painting	180	m2	115.63		20,813
27.13	Pair of doors including frame and hardware	2	no	2,500.00		5,000
27.14	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (60m2) - Dedicated</b>					
27.15	Masonry walls including painting	139	m2	173.44		24,108
27.16	Pair of doors including frame and hardware	1	no	2,300.00		2,300
27.17	Lighting	1	item	600.00		600
	<b>Vertical Risers - Existing</b>					
27.18	Concrete walls	139	m2	280.00		38,920
27.19	Access door including frame and hardware	12	no	1,550.00		18,600
27.20	Sealing for fire, noise and water	1	item	4,800.00		4,800
	<b>Vertical Risers - New Dedicated</b>					
27.21	Associated demo	0	item	18,000.00		0
27.22	Concrete walls	0	m2	450.00		0
27.23	Access door including frame and hardware	0	no	1,200.00		0
27.24	Sealing for fire, noise and water	0	item	4,800.00		0
27.25	Assumed make good costs	0	item	5,000.00		0
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		N/A			
27.26	Lead in conduits from riser to individual tenancy termination point with space for termination equipment		N/A			



	Description	Quantity	Unit	Rate	Factor	Total
27.27	Associated builders works allowance per floor		N/A			
	<b>Total Net Trade Cost</b>					<b>128,778</b>

27 Class 5\_7 Storey Office\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
27.28	Preliminaries	0.14	item	128,777.81		18,029
27.29	Margin	0.08	item	146,806.71		11,745
	<b>Total Outturn Cost Cost</b>					<b>158,551</b>
27.30	Total Build Cost	1	item	105,000.00 0.00	0.00	0
27.31	% of total Construction Cost	0.002				

**Class 5\_7 Storey Office\_RETROFIT**

**158,551**

28 Class 5\_20 Storey Office\_CURRENT

	Description	Quantity	Unit	Rate	Factor	Total
28.1	The selected sample is a 20 level A Grade commercial office building. Total GFA is approx 85,000m2					
28.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
28.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Entry Point</b>					
28.4	Comms trench from entry point to telecommunications room	80	m	28.50		2,280
28.5	Conduits from entry point to telecommunications room	80	m	25.00		2,000
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
28.6	Masonry walls including painting	188	m2	115.63		21,738
28.7	Pair of doors including frame and hardware	2	no	2,500.00		5,000
28.8	Lighting	1	item	1,500.00		1,500
	<b>Telecommunications Equipment Room - Dedicated</b>		N/A			
	<b>Vertical Risers - Existing</b>					
28.9	Concrete walls	507	m2	280.00		141,960
28.10	Access door including frame and hardware	44	no	1,550.00		68,200
28.11	Sealing for fire, noise and water	1	item	17,600.00		17,600
	<b>Vertical Risers - New Dedicated</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		Note			
	<b>Total Net Trade Cost</b>					<b>260,278</b>
28.12	Preliminaries	0.12	item	260,277.50		31,233
28.13	Margin	0.08	item	291,510.80		23,321
	<b>Total Outturn Cost Cost</b>					<b>314,832</b>
28.14	Total Build Cost	1	item	187,000.00 0.00	0.00	0

28 Class 5\_20 Storey Office\_CURRENT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
28.15	% of total Construction Cost	0.0017				

**Class 5\_20 Storey Office\_CURRENT**

**314,832**

29 Class 5\_20 Storey Office\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
29.1	The selected sample is a 20 level A Grade commercial office building. Total GFA is approx 85,000m2					
29.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
29.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
	<b>Entry Point</b>					
29.4	Comms trench from entry point to telecommunications room	150	m	28.50		4,275
29.5	Conduits from entry point to telecommunications room	150	m	25.00		3,750
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
29.6	Masonry walls including painting	180	m2	115.63		20,813
29.7	Pair of doors including frame and hardware	2	no	2,500.00		5,000
29.8	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (110m2) - Dedicated</b>					
29.9	Masonry walls including painting	133	m2	115.63		15,378
29.10	Pair of doors including frame and hardware	4	no	1,850.00		7,400
29.11	Lighting	1	item	2,000.00		2,000
	<b>Vertical Risers - Existing</b>					
29.12	Concrete walls	507	m2	280.00		141,960
29.13	Access door including frame and hardware	44	no	1,550.00		68,200
29.14	Sealing for fire, noise and water	1	item	17,600.00		17,600
	<b>Vertical Risers - New Dedicated</b>					
29.15	Concrete walls	381	m2	280.00		106,680
29.16	Access door including frame and hardware	66	no	1,200.00		79,200
29.17	Sealing for fire, noise and water	1	item	26,400.00		26,400
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		NA			0
	<b>Total Net Trade Cost</b>					<b>499,656</b>
29.18	Preliminaries	0.12	item	499,655.63		59,959
29.19	Margin	0.08	item	559,614.30		44,769
	<b>Total Outturn Cost Cost</b>					<b>604,383</b>
29.20	Total Build Cost	1	item	187,000,00 0.00	0.00	0
29.21	% of total Construction Cost	0.003				

**29 Class 5\_20 Storey Office\_AS SPECIFIED**

	Description	Quantity	Unit	Rate	Factor	Total
29.21	% of total Construction Cost	0.003				<b>604,383</b>

**30 Class 5\_20 Storey Office\_RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
30.1	The selected sample is a 20 level A Grade commercial office building. Total GFA is approx 85,000m2					
30.2	The construction consist of post tensioned insitu structural slab with curtain external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
30.3	It is assumed current risers provided in as specified scenarios are sufficient to accommodate proposed specification for vertical risers.					
30.4	Access provided freely by owner/occupant					
30.5	There is ceiling space with reasonable access					
30.6	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
30.7	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
30.8	Allow for saw cutting existing concrete	300	m	25.00		7,500
30.9	Allow demolition of concrete	150	m	60.00		9,000
30.10	Comms trench from entry point to telecommunications room	150	m	28.50		4,275
30.11	Conduits from entry point to telecommunications room	150	m	30.00		4,500
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
30.12	Masonry walls including painting	180	m2	115.63		20,813
30.13	Pair of doors including frame and hardware	2	no	2,500.00		5,000
30.14	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (110m2) - Dedicated</b>					
30.15	Masonry walls including painting	133	m2	173.44		23,067
30.16	Pair of doors including frame and hardware	4	no	2,300.00		9,200
30.17	Lighting	1	item	600.00		600
	<b>Vertical Risers - Existing</b>					
30.18	Masonry walls including painting	507	m2	173.44		87,933
30.19	Access door including frame and hardware	44	no	1,550.00		68,200
30.20	Sealing for fire, noise and water	1	item	17,600.00		17,600
	<b>Vertical Risers - New Dedicated</b>					
30.21	Associated demo	1	item	79,200.00		79,200
30.22	Concrete walls	381	m2	280.00		106,680
30.23	Access door including frame and hardware	66	no	1,200.00		79,200
30.24	Sealing for fire, noise and water	1	item	26,400.00		26,400
30.25	Assumed make good costs	66	item	1,500.00		99,000

**30 Class 5\_20 Storey Office\_RETROFIT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		N/A			
30.26	Lead in conduits from riser to individual tenancy termination point with space for termination equipment		NA			0
	<b>Total Net Trade Cost</b>					<b>649,168</b>
30.27	Preliminaries	0.14	item	649,167.50		90,883
30.28	Margin	0.08	item	740,050.95		59,204
	<b>Total Outturn Cost Cost</b>					<b>799,255</b>
30.29	Total Build Cost	1	item	187,000,00 0.00	0.00	0
30.30	% of total Construction Cost	0.004				

**Class 5\_20 Storey Office\_RETROFIT**

**799,255**

**31 Class 6\_Large Shopping Centre\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
31.1	The selected sample shopping centre is a 4 level regional shopping centre . Total GFA is approx 50,000m2					
31.2	The construction consist of conventional insitu structural slab with precast concrete and shopfront external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
31.3	Comms trench from entry point to telecommunications room	125	m	28.50		3,563
31.4	Conduits from entry point to telecommunications room	125	m	25.00		3,125
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
31.5	Masonry walls including painting	208	m2	115.63		24,050
31.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
31.7	Lighting	1	item	1,500.00		1,500
	<b>Telecommunications Equipment Room - Dedicated</b>		N/A			
	<b>Vertical Risers - Existing</b>					
31.8	Concrete walls	47	m2	280.00		13,160
31.9	Access door including frame and hardware	8	no	1,550.00		12,400
31.10	Sealing for fire, noise and water	1	item	4,800.00		4,800
	<b>Vertical Risers - New Dedicated</b>		N/A			
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>					
31.11	Not applicable		Note			
	<b>Total Net Trade Cost</b>					<b>67,598</b>
31.12	Preliminaries	0.12	item	67,597.50		8,112
31.13	Margin	0.08	item	75,709.20		6,057
	<b>Total Outturn Cost Cost</b>					<b>81,766</b>

	Description	Quantity	Unit	Rate	Factor	Total

31 Class 6\_Large Shopping Centre\_CURRENT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
31.14	Total Build Cost	1	item	50,000,000.00	0.00	0
31.15	% of total Construction Cost	0.0016				

**Class 6\_Large Shopping Centre\_CURRENT**

**81,766**

32 Class 6\_Large Shopping Centre\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
32.1	The selected sample shopping centre is a 4 level regional shopping centre . Total GFA is approx 50,000m2					
32.2	The construction consist of conventional insitu structural slab with precast concrete and shopfront external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
32.3	Comms trench from entry point to telecommunications room	125	m	28.50		3,563
32.4	Conduits from entry point to telecommunications room	125	m	25.00		3,125
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
32.5	Masonry walls including painting	208	m2	115.63		24,050
32.6	Pair of doors including frame and hardware	2	no	2,500.00		5,000
32.7	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (60m2) - Dedicated</b>					
32.8	Masonry walls including painting	104	m2	115.63		12,025
32.9	Pair of doors including frame and hardware	2	no	1,850.00		3,700
32.10	Lighting	1	item	2,000.00		2,000
	<b>Vertical Risers - Existing</b>					
32.11	Concrete walls	47	m2	280.00		13,160
32.12	Access door including frame and hardware	8	no	1,550.00		12,400
32.13	Sealing for fire, noise and water	1	item	17,600.00		17,600
	<b>Vertical Risers - New Dedicated</b>					
32.14	Concrete walls	47	m2	280.00		13,160
32.15	Access door including frame and hardware	8	no	1,200.00		9,600
32.16	Sealing for fire, noise and water	1	item	3,200.00		3,200
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		N/A			
32.17	Lead in conduits from riser to individual tenancy/shop/units termination point with space for termination equipment		NA			0
	<b>Total Net Trade Cost</b>					<b>123,583</b>
32.18	Preliminaries	0.12	item	123,582.50		14,830
32.19	Margin	0.08	item	138,412.40		11,073
	<b>Total Outturn Cost Cost</b>					<b>149,485</b>

	Description	Quantity	Unit	Rate	Factor	Total
32.20	Total Build Cost	1	item	50,000,000. 00	0.00	0



**32 Class 6\_Large Shopping Centre\_AS SPECIFIED**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
32.21	% of total Construction Cost	0.003				

**33 Class 6\_Large Shopping Centre\_RETROFIT**

**149,485**

	Description	Quantity	Unit	Rate	Factor	Total
33.1	The selected sample shopping centre is a 4 level regional shopping centre . Total GFA is approx 50,000m2					
33.2	The construction consist of conventional insitu structural slab with precast concrete and shopfront external wall construction mainly. Internal party walls consist of precast concrete and block walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
33.3	Access provided freely by owner/occupant					
33.4	There is ceiling space with reasonable access					
33.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
33.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
33.7	Allow for saw cutting existing concrete	250	m	25.00		6,250
33.8	Allow demolition of concrete	125	m	60.00		7,500
33.9	Comms trench from entry point to telecommunications room	125	m	28.50		3,563
33.10	Conduits from entry point to telecommunications room	125	m	30.00		3,750
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
33.11	Masonry walls including painting	208	m2	115.63		24,050
33.12	Pair of doors including frame and hardware	2	no	2,500.00		5,000
33.13	Lighting	1	item	1,000.00		1,000
	<b>Telecommunications Equipment Room (60m2) - Dedicated</b>					
33.14	Masonry walls including painting	104	m2	173.44		18,038
33.15	Pair of doors including frame and hardware	2	no	2,300.00		4,600
33.16	Lighting	1	item	600.00		600
	<b>Vertical Risers - Existing</b>					
33.17	Precast concrete walls	47	m2	280.00		13,160
33.18	Access door including frame and hardware	8	no	1,550.00		12,400
33.19	Sealing for fire, noise and water	1	item	17,600.00		17,600
	<b>Vertical Risers - New Dedicated</b>					
33.20	Associated demo	1	item	9,600.00		9,600
33.21	Masonry walls	47	m2	173.44		8,152
33.22	Access door including frame and hardware	8	no	2,300.00		18,400
33.23	Sealing for fire, noise and water	1	item	3,200.00		3,200
33.24	Assumed make good costs	8	item	1,500.00		12,000
	<b>Telecommunications Internal Lead in Conduit - It is normal practice for this to be carried out by the tenant of each commercial tenancy</b>		N/A			

**33 Class 6\_Large Shopping Centre\_RETROFIT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
33.25	Lead in conduits from riser to individual tenancy/shop/units termination point with space for termination equipment		NA			0
	<b>Total Net Trade Cost</b>					<b>168,862</b>
33.26	Preliminaries	0.14	item	168,861.56		23,641
33.27	Margin	0.08	item	192,502.18		15,400
	<b>Total Outturn Cost Cost</b>					<b>207,902</b>
33.28	Total Build Cost in 2014	1	item	50,000,000.00	0.00	0
33.29	% of total Construction Cost	0.004				

**Class 6\_Large Shopping Centre\_RETROFIT**

**207,902**

**34 Class 6\_Restaraunt\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
34.1	Two level restaurant building consisting of approximately 115m2 floor plates					
34.2	The construction consist of insitu structural slab with masonry and shop front external wall. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
34.3	Dedicated Conduit from building perimeter to main switch		N/A			
	<b>Telecommunications Equipment Room</b>					
34.4	Masonry walls including painting		N/A			
34.5	Pair of doors including frame and hardware		N/A			
34.6	Lighting		N/A			
34.7	Electrical		N/A			
	<b>Vertical Risers</b>					
34.8	Masonry walls		N/A			
34.9	Access door including frame and hardware		N/A			
34.10	Sealing for fire, noise and water		N/A			
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>0</b>
34.11	Preliminaries	0.12	item	0.00		0
34.12	Margin	0.08	item	0.00		0
	<b>Total Outturn Cost Cost</b>					<b>0</b>
34.13	Total Build Cost	1	item	552,000.00	0.00	0
34.14	% of total Construction Cost	0.000				

**Class 6\_Restaraunt\_CURRENT**

**0**

35 Class 6\_Restaurant\_AS SPECIFIED

	Description	Quantity	Unit	Rate	Factor	Total
35.1	Two level restaurant building consisting of approximately 115m2 floor plates					
35.2	The construction consist of insitu structural slab with masonry and shop front external wall. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Entry Point</b>					
35.3	Conduit from building perimeter to main switch	7	m	25.00		175
	<b>Telecommunications Equipment Room (9m2) - Dedicated</b>					
35.4	Masonry walls including painting	31	m2	115.63		3,584
35.5	Pair of doors including frame and hardware	1	no	1,850.00		1,850
35.6	Lighting	1	item	450.00		450
	<b>Vertical Risers</b>					
35.7	Masonry walls	6	m2	115.63		694
35.8	Access door including frame and hardware	1	no	1,200.00		1,200
35.9	Sealing for fire, noise and water	1	item	400.00		400
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>8,353</b>
35.10	Preliminaries	0.12	item	8,353.13		1,002
35.11	Margin	0.08	item	9,355.50		748
	<b>Total Outturn Cost Cost</b>					<b>10,104</b>
35.12	Total Build Cost	1	item	552,000.00	0.00	0
35.13	% of total Construction Cost	0.018				

**Class 6\_Restaurant\_AS SPECIFIED**

**10,104**

36 Class 6\_Restaurant\_RETROFIT

	Description	Quantity	Unit	Rate	Factor	Total
36.1	Two level restaurant building consisting of approximately 115m2 floor plates					
36.2	The construction consist of insitu structural slab with masonry and shop front external wall. Internal party walls consist of block walls with plasterboard lining over furring channels.					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
36.3	Access provided freely by owner/occupant					
36.4	There is ceiling space with reasonable access					
36.5	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
36.6	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
36.7	Allow for saw cutting existing concrete	14	m	25.00		350
36.8	Allow demolition of concrete	7	m	60.00		420
36.9	Conduit from building perimeter to main switch	7	m	30.00		210

	Description	Quantity	Unit	Rate	Factor	Total
	Telecommunications Equipment Room (9m2) - Dedicated					

**36 Class 6\_Restaraunt\_RETROFIT**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
36.10	Masonry walls including painting	31	m2	173.44		5,377
36.11	Pair of doors including frame and hardware	1	no	1,850.00		1,850
36.12	Lighting	1	item	450.00		450
	<b>Vertical Risers</b>					
36.13	Associated demolition	1	item	750.00		750
36.14	Masonry walls	6	m2	173.44		1,041
36.15	Access door including frame and hardware	1	no	1,200.00		1,200
36.16	Sealing for fire, noise and water	1	item	400.00		400
36.17	Making good to damaged building fabric including plastering and painting	1	item	500.00		500
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
	<b>Total Net Trade Cost</b>					<b>12,547</b>
36.18	Preliminaries	0.14	item	12,547.19		1,757
36.19	Margin	0.08	item	14,303.79		1,144
	<b>Total Outturn Cost Cost</b>					<b>15,448</b>
36.20	Total Build Cost	1	item	552,000.00	0.00	0
36.21	% of total Construction Cost	0.028				

**Class 6\_Restaraunt\_RETROFIT**

**15,448**

**37 Class 9c\_Aged Care\_CURRENT**

	Description	Quantity	Unit	Rate	Factor	Total
37.1	The sample nursing home consist of Residential Care Facility. The facility is to include 40 high and 60 low care places					
37.2	The building consist of 4 floors with hotel style accommodation ie each room consist of ensuite					
37.3	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft wall system and block construction to risers and stair wells					
	<b>Entry Point</b>					
37.4	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
37.5	Conduits from entry point to telecommunications room	50	m	25.00		1,250
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
37.6	Masonry walls including painting	160	m2	115.63		18,500
37.7	Pair of doors including frame and hardware	2	no	1,850.00		3,700
37.8	Lighting	1	item	1,000.00		1,000
	<b>Vertical Risers</b>					
37.9	Masonry walls	53	m2	115.63		6,128
37.10	Access door including frame and hardware	15	no	1,550.00		23,250
37.11	Sealing for fire, noise and water	1	item	6,000.00		6,000
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			

	Description	Quantity	Unit	Rate	Factor	Total
37.12	Does not meet proposed specification					0

Description	Quantity	Unit	Rate	Factor	Total
<b>37 Class 9c_Aged Care_CURRENT</b>					
<i>(Continued)</i>					
<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>	<b>Factor</b>	<b>Total</b>
<b>Total Net Trade Cost</b>					<b>61,253</b>
37.13 Preliminaries	0.12	item	61,253.13		7,350
37.14 Margin	0.08	item	68,603.50		5,488
<b>Total Outturn Cost Cost</b>					<b>74,092</b>
37.15 Total Build Cost	1	item	25,000,000.00	0.00	0
37.16 % of total Construction Cost	0.003				

**Class 9c\_Aged Care\_CURRENT**

**74,092**

**38 Class 9c\_Aged Care\_AS SPECIFIED**

Description	Quantity	Unit	Rate	Factor	Total
38.1 The sample nursing home consist of Residential Care Facility. The facility is to include 40 high and 60 low care places with GFA of 5,200m2					
38.2 The building consist of 4 floors with hotel style accommodation ie each room consist of ensuite					
38.3 The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft liner system and block construction to risers and stair wells					
38.4 Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 19m2					
<b>Entry Point</b>					
38.5 Comms trench from entry point to telecommunications room	50	m	28.50		1,425
38.6 Conduits from entry point to telecommunications room	50	m	25.00		1,250
<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
38.7 Masonry walls including painting	152	m2	115.63		17,575
38.8 Pair of doors including frame and hardware	2	no	1,850.00		3,700
38.9 Lighting	1	item	1,000.00		1,000
<b>Telecommunications Equipment Room (19m2) - Dedicated</b>					
38.10 Masonry walls including painting	0	m2	115.63		0
38.11 Pair of doors including frame and hardware	0	no	1,850.00		0
38.12 Lighting	0	item	450.00		0
<b>Vertical Risers - Existing</b>					
38.13 Masonry walls	93	m2	115.63		10,753
38.14 Access door including frame and hardware	21	no	1,550.00		32,550
38.15 Sealing for fire, noise and water	1	item	8,400.00		8,400
<b>Vertical Risers - New Dedicated</b>					
38.16 Masonry walls	0	m2	115.63		0
38.17 Access door including frame and hardware	0	no	1,200.00		0
38.18 Sealing for fire, noise and water	0	item	8,400.00		0
<b>Telecommunications Internal Lead in Conduit</b>		N/A			

**38 Class 9c\_Aged Care\_AS SPECIFIED**

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
38.19	Lead in conduits from riser to individual units termination point with space for termination equipment		N/A			
	<b>Total Net Trade Cost</b>					<b>76,653</b>
38.20	Preliminaries	0.12	item	76,653.13		9,198
38.21	Margin	0.08	item	85,851.50		6,868
	<b>Total Outturn Cost Cost</b>					<b>92,720</b>
38.22	Total Build Cost	1	item	25,000,000.00	0.00	0
38.23	% of total Construction Cost	0.004				
	<b>Telecommunications Spaces Floor Distributor (9m2) - Below the Line</b>					
38.24	This requirement is already provided for in the way of data room					

**Class 9c\_Aged Care\_AS SPECIFIED**

**92,720**

**39 Class 9c\_Aged Care\_RETROFIT**

	Description	Quantity	Unit	Rate	Factor	Total
39.1	The sample nursing home consist of Residential Care Facility. The facility is to include 40 high and 60 low care places					
39.2	The building consist of 4 floors with hotel style accommodation ie each room consist of ensuite with shared common areas					
39.3	The construction consist of post tensioned insitu structural slab with masonry veneer construction mainly. Internal party walls consist mainly of lightweight fire rated shaft liner system and block construction to risers and stair wells					
39.4	Current practice main switch rooms are sufficiently spaced to accommodate the specified equipment room size of 19m2					
	<b>Clarifications and Key Assumptions Related to Retro Fit</b>					
39.5	Access provided freely by owner/occupant					
39.6	There is ceiling space with reasonable access					
39.7	Where building fabric is damaged the rectification works is limited to area adjacent to works only such as painting					
39.8	Labour cost in retro fitting is marginally more expensive compared to new builds					
	<b>Entry Point</b>					
39.9	Allow for saw cutting existing concrete	100	m	25.00		2,500
39.10	Allow demolition of concrete	50	m	60.00		3,000
39.11	Comms trench from entry point to telecommunications room	50	m	28.50		1,425
39.12	Conduits from entry point to telecommunications room	50	m	30.00		1,500
	<b>Telecommunications Equipment Room - Currently in Main switchboard room</b>					
39.13	Masonry walls including painting	152	m2	115.63		17,575
39.14	Pair of doors including frame and hardware	2	no	1,850.00		3,700
39.15	Lighting	1	item	1,000.00		1,000



	Description	Quantity	Unit	Rate	Factor	Total
	Telecommunications Equipment Room (19m2) - Dedicated					

39 Class 9c\_Aged Care\_RETROFIT

(Continued)

	Description	Quantity	Unit	Rate	Factor	Total
39.16	Masonry walls including painting	0	m2	173.44		0
39.17	Pair of doors including frame and hardware	0	no	2,300.00		0
39.18	Lighting	0	item	600.00		0
	<b>Vertical Risers - Existing</b>					
39.19	Masonry walls	93	m2	115.63		10,753
39.20	Access door including frame and hardware	21	no	1,550.00		32,550
39.21	Sealing for fire, noise and water	1	item	8,400.00		8,400
	<b>Vertical Risers - New Dedicated</b>					
39.22	Associated demolition	0	item	3,500.00		0
39.23	Masonry walls	0	m2	173.44		0
39.24	Access door including frame and hardware	0	no	1,200.00		0
39.25	Sealing for fire, noise and water	0	item	8,400.00		0
39.26	Assumed make good costs	0	item	4,500.00		0
	<b>Telecommunications Internal Lead in Conduit</b>		N/A			
39.27	Lead in conduits from riser to individual units termination point with space for termination equipment					
	<b>Total Net Trade Cost</b>					<b>82,403</b>
39.28	Preliminaries	0.14	item	82,403.13		11,536
39.29	Margin	0.08	item	93,939.56		7,515
	<b>Total Outturn Cost Cost</b>					<b>101,455</b>
39.30	Total Build Cost	1	item	25,000,000.00	0.00	0
39.31	% of total Construction Cost	0.004				
	<b>Telecommunications Spaces Floor Distributor (9m2) - Below the Line</b>					
39.32	This requirement is already provided for in the way of data room					

Class 9c\_Aged Care\_RETROFIT

101,455