

SECTION 4: ELECTRICAL INSTALLATION

Volume 2 of 3: Part D (page 224-page 3)

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No		Quantity	Rate	Amount
	<u>SECTION NO 4</u>			
	<u>BILL NUMBER 1</u>			
	<u>ELECTRICAL INSTALLATION (PROVISIONAL)</u>			
	-WORK GROUP 160-			
	<p><u>NOTE 1:</u> Tenderers are advised to study the specification and will be held to have allowed for all the requirements of same when pricing the Bills of Quantities as no claims whatsoever in this regard will be entertained at a later date</p> <p><u>NOTE2:</u> For the purposes of tendering, only the total quantity shall be used in calculating the amount for inclusion in the tender at the tendered rate. The quantities in the description column immediately below the item represent the quantities per section for information and administration only</p> <p><u>NOTE 3:</u> All items in this section shall be deemed to fall into Work Group No 160 for Haylett Formula purposes</p>			
	<u>SUBSTATION</u>			
	<u>Miniature Substation</u>			
	<u>Supply and install the complete 630KVA miniature substation including Breakers etc. as per engineers detail</u>			
1	Material	No	1	
2	Labour	No	1	
	<u>LOW TENSION RETICULATION</u>			
	Carried to Collection			R
	Section No. 4 Bill No. 1 Electrical Installation (Provisional)			
	RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Distribution Boards				
	<u>Supply and install freestanding distribution boards complete with doors, frames, sub-frames, chassis, fixtures, fittings, spare capacity, busbars, etc. as per the specification</u>			
	<u>Remove existing surface mounted distribution boards</u>			
3	Material			SUM
4	Labour			SUM
	<u>DB-Main outdoor, plinth mounted, weather proof kiosk, complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification. (see drawing and single line for details)</u>			
5	Material	No	1	
6	Labour	No	1	
	<u>DB-GEN Standby Generator complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification. (see drawing and single line for details)</u>			
7	Material	No	1	
8	Labour	No	1	
	<u>DB-M (DB-M, DB-M/EMG, Meter compartment) outdoor, plinth mounted, weather proof kiosk, complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 29 of 130 (see drawing and single line for details)</u>			
9	Material	No	1	
10	Labour	No	1	
	Carried to Collection			R
	Section No. 4			
	Bill No. 1			
	Electrical Installation (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>DB-G (DB-G, DB-G/EMG) flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 31 of 130 (see drawing and single line for details)</u>			
11	Material	No	2	
12	Labour	No	1	
	<u>DB-1 (DB-1, DB-1/EMG) flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 33 of 130 (see drawing and single line for details)</u>			
13	Material	No	1	
14	Labour	No	1	
	<u>DB-2 (DB-2, DB-2/EMG) flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 35 of 130 (see drawing and single line for details)</u>			
15	Material	No	1	
16	Labour	No	1	
	<u>DB-3 (DB-3, DB-3/EMG) flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 37 of 130 (see drawing and single line for details)</u>			
17	Material	No	2	
18	Labour	No	1	
	<u>DB-K (DB-K, DB-K/EMG) flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 39 of 130 (see drawing and single line for details)</u>			
19	Material	No	4	
	Carried to Collection			R
	Section No. 4 Bill No. 1 Electrical Installation (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

20	Labour	No	1	
	<u>DB-C flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 41 of 130 (see drawing and single line for details)</u>			
21	Material	No	5	
22	Labour	No	1	
	<u>DB-C-1 outdoor flush mounted and weather proof complete with doors, frames, subframes, fixtures, chassis, fittings, terminations and wiring with spare space. Main isolator and busbars to be in separate busbar compartment</u>			
23	Material	No	2	
24	Labour	No	1	
	<u>DB-R flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 42 of 130 (see drawing and single line for details)</u>			
25	Material	No	1	
26	Labour	No	1	
	<u>DB-S flush mounted complete with doors, frames, subframes, fixtures, chassis, fittings, terminations, busbars and wiring with spare space as per specification, part 23 page 43 of 130 (see drawing and single line for details)</u>			
27	Material	No	5	
28	Labour	No	1	
	<u>Telephone termination box, 300x300x120 mm flush mounted complete with doors, frames, subframes, fixtures and 20mm thick soft board.</u>			
29	Material	No	9	
	Carried to Collection			R
	Section No. 4 Bill No. 1 Electrical Installation (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 4

Bill No. 1

Electrical Installation (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

224

225

226

227

228

Carried Forward to Summary of Section No. 4

R

Section No. 4
Bill No. 1
Electrical Installation (Provisional)
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No	Quantity	Rate	Amount
<u>SECTION NO 4</u>			
<u>BILL NUMBER 2</u>			
<u>ELECTRICAL INSTALLATION (PROVISIONAL)</u>			
-WORK GROUP 160-			
<u>NOTE 1:</u> Tenderers are advised to study the specification and will be held to have allowed for all the requirements of same when pricing the Bills of Quantities as no claims whatsoever in this regard will be entertained at a later date			
<u>NOTE2:</u> For the purposes of tendering, only the total quantity shall be used in calculating the amount for inclusion in the tender at the tendered rate. The quantities in the description column immediately below the item represent the quantities per section for information and administration only			
<u>NOTE 3:</u> All items in this section shall be deemed to fall into Work Group No 160 for Haylett Formula purposes			
<u>EXISTING CABLES</u>			
<u>All existing cables to be located and the routes determined on site. Cables still in commission to be extended and re-routed where necessary. Cables not in commission to be removed.</u>			
1	Material		SUM
2	Labour		SUM
<u>LOW TENSION CABLES (PROVISIONAL)</u>			
<u>600 / 1000 V Grade PVC/PVC/SWA/PVC stranded copper conductor cable (terminations and earth conductor elsewhere measured)</u>			
Carried to Collection			R
Section No. 4 Bill No. 2 Low Tension Cables (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

<u>Cable drawn into sleeves and/or laid into trenches (cable sleeves and trenching elsewhere measured)</u>					
<u>4mm² x 3 core</u>					
3	Material	m	83		
4	Labour	m	83		
<u>4mm² x 4 core</u>					
5	Material	m	294		
6	Labour	m	294		
<u>10mm² x 3 core</u>					
7	Material	m	56		
8	Labour	m	56		
<u>10mm² x 4 core</u>					
9	Material	m	131		
10	Labour	m	131		
<u>16mm² x 4 core</u>					
11	Material	m	415		
12	Labour	m	415		
<u>25mm² x 4 core</u>					
13	Material	m	146		
14	Labour	m	146		
<u>70mm² x 4 core</u>					
15	Material	m	36		
16	Labour	m	36		
Carried to Collection					
Section No. 4 Bill No. 2 Low Tension Cables (Provisional) RUBIQUANT QUANTITY SURVEYORS					
				R	

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>95mm² x 4 core</u>			
17	Material	m	978	
18	Labour	m	978	
	<u>Cable terminations complete, including gland shrouds, lugs, number tags, tape, etc and connecting</u>			
	<u>4mm² x 4 core</u>			
19	Material	No	8	
20	Labour	No	8	
	<u>10mm² x 4 core</u>			
21	Material	No		
22	Labour	No		
	<u>16mm² x 4 core</u>			
23	Material	No	14	
24	Labour	No	14	
	<u>25mm² x 4 core</u>			
25	Material	No	2	
26	Labour	No	2	
	<u>70mm² x 4 core</u>			
27	Material	No	4	
28	Labour	No	4	
	<u>95mm² x 4 core</u>			
29	Material	No	16	
30	Labour	No	16	
	Carried to Collection			R
	Section No. 4			
	Bill No. 2			
	Low Tension Cables (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Provisional amount allowed for repairs to lightning
protection and issue a certificate

67 Material

SUM

68 Labour

SUM

Carried to Collection

R

Section No. 4
Bill No. 2
Low Tension Cables (Provisional)
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 4

Bill No. 2

Low Tension Cables (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

230

231

232

233

234

235

236

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 2

Low Tension Cables (Provisional)

RUBIQUANT

QUANTITY SURVEYORS

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No		Quantity	Rate	Amount
	<u>SECTION NO 4</u>			
	<u>BILL NUMBER 3</u>			
	<u>SMALL POWER AND LIGHTING</u>			
	-WORK GROUP 160-			
	<u>NOTE 1:</u> Tenderers are advised to study the specification and will be held to have allowed for all the requirements of same when pricing the Bills of Quantities as no claims whatsoever in this regard will be entertained at a later date			
	<u>NOTE2:</u> For the purposes of tendering, only the total quantity shall be used in calculating the amount for inclusion in the tender at the tendered rate. The quantities in the description column immediately below the item represent the quantities per section for information and administration only			
	<u>NOTE 3:</u> All items in this section shall be deemed to fall into Work Group No 160 for Haylett Formula purposes			
	<u>EXISTING ELECTRICAL INSTALLATION</u>			
	<u>Remove all existing light fittings, light switches and switched socket outlets</u>			
1	Material	No	1,247	
2	Labour	No	1,247	
	<u>CONDUITS AND ACCESSORIES - EXISTING</u>			
	<u>Remove existing surface mounted conduit and chase into walls for the following: conduit, wall boxes etc.</u>			
	Carried to Collection			R
	Section No. 4 Bill No. 3 Small Power and Lighting (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

CONDUITS AND ACCESSORIES - NEW

Conduit and accessories placed into position for casting into concrete or screed, for building into concrete or brickwork and for surface mounted in ceiling void including bending, threading, jointing, short lengths, draw boxes, couplings, tees and saddles.

20mm Galvanised conduit

7	Material	m	20,782	
---	----------	---	--------	--

8	Labour	m	7,816	
---	--------	---	-------	--

25mm Galvanised conduit

9	Material	m	8,803	
---	----------	---	-------	--

10	Labour	m	5,014	
----	--------	---	-------	--

50mm Steel conduit

11	Material	m	277	
----	----------	---	-----	--

12	Labour	m	277	
----	--------	---	-----	--

60mm Round Galvanised conduit box

13	Material	No	840	
----	----------	----	-----	--

14	Labour	No	840	
----	--------	----	-----	--

100x50mm Galvanised Wall box

15	Material	No	265	
----	----------	----	-----	--

16	Labour	No	265	
----	--------	----	-----	--

100x100mm Galvanised Wall box

17	Material	No	52	
----	----------	----	----	--

18	Labour	No	52	
----	--------	----	----	--

Carried to Collection

R

Section No. 4
 Bill No. 3
 Small Power and Lighting (Provisional)
**RUBIQUANT
 QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

BLANK COVERS

Supply delivery and installation of the following:

100X100mm

19	Material	No	4
20	Labour	No	4

Weather proof box for isolators

21	Material	No	9
22	Labour	No	9

CONDUCTORS

**Supply, delivery and installation of 600/1000V grade
PVC insulated stranded copper (all colours)
conductors drawn into conduit.**

1.5mm²

23	Material	m	16,490
24	Labour	m	18,139

2.5mm²

25	Material	m	11,415
26	Labour	m	12,557

4mm²

27	Material	m	11,415
28	Labour	m	11,843

6mm²

29	Material	m	673
30	Labour	m	455

Carried to Collection

R

Section No. 4
Bill No. 3
Small Power and Lighting (Provisional)
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>10mm²</u>				
31	Material	m	142		
32	Labour	m	142		
	<u>16mm²</u>				
33	Material	m	181		
34	Labour	m	139		
	<u>1.5mm² Bare stranded copper earth conductors</u>				
35	Material	m	7,538		
36	Labour	m	9,437		
	<u>2.5mm² Bare stranded copper earth conductors</u>				
37	Material	m	10,754		
38	Labour	m	10,799		
	<u>4mm² Bare stranded copper earth conductors</u>				
39	Material	m	5,126		
40	Labour	m	4,046		
	<u>6mm² Bare stranded copper earth conductors</u>				
41	Material	m	109		
42	Labour	m	109		
	<u>10mm² Bare stranded copper earth conductors</u>				
43	Material	m	74		
44	Labour	m	74		
	<u>16mm² Bare stranded copper earth conductors</u>				
45	Material	m	90		
	Carried to Collection				
	Section No. 4				
	Bill No. 3				
	Small Power and Lighting (Provisional)				
	RUBIQUANT				
	QUANTITY SURVEYORS				

R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

46	Labour	m	69
<u>SOCKET OUTLETS</u>			
<u>Supply, delivery and installation of Switched socket outlet points complete with cover plates, installed flush.</u>			
<u>16A round 3-pin 250V switched socket outlet in 100x100 outlet box</u>			
47	Material	No	1
48	Labour	No	1
<u>2 x 16A round 3-pin 250V switched double socket outlet in 100x100 outlet box</u>			
49	Material	No	46
50	Labour	No	46
<u>2 x 16A round ceiling mounted 3-pin 250V switched socket outlet in 100x100 outlet box</u>			
51	Material	No	6
52	Labour	No	6
<u>16A waterproof 3-pin 250V grade switched socket outlet (red)</u>			
53	Material	No	2
54	Labour	No	2
<u>LIGHT SWITCHES</u>			
<u>Supply, delivery and installation of the following :</u>			
<u>16A, 250V single lever one way plus cover plate</u>			
55	Material	No	227
56	Labour	No	227

Carried to Collection

R

Section No. 4
Bill No. 3
Small Power and Lighting (Provisional)
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>16A, 250V multi lever one way plus cover plate</u>			
57	Material	No	14	
58	Labour	No	14	
	<u>16A, 250V multi lever two way plus cover plate</u>			
59	Material	No	65	
60	Labour	No	65	
	<u>Day/Night Switch</u>			
61	Material	No	3	
62	Labour	No	3	
	<u>ISOLATORS</u>			
	<u>80A 3 pole 250V surface IP55 mounted (Water Heating)</u>			
63	Material	No	1	
64	Labour	No	1	
	<u>60A 3 pole 250V surface IP55 mounted (Deep Fryer)</u>			
65	Material	No	1	
66	Labour	No	1	
	<u>60A 2 pole 250V surface mounted (geyser isolator)</u>			
67	Material	No	9	
68	Labour	No	9	
	<u>60A 2 pole 250V flush mounted (Hand dryer)</u>			
69	Material	No	15	
70	Labour	No	15	
	Carried to Collection			R
	Section No. 4			
	Bill No. 3			
	Small Power and Lighting (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>40A 3 pole 250V surface IP65 mounted (Cold Room)</u>			
71	Material	No	3	
72	Labour	No	3	
	<u>40A 3 pole 250V surface IP55 mounted (Industrial Dish Washer)</u>			
73	Material	No	1	
74	Labour	No	1	
	<u>40A 3 pole 250V surface IP55 mounted (150 liter boiling pan)</u>			
75	Material	No	1	
76	Labour	No	1	
	<u>40A 3 pole 250V IP55 pedestal mounted (Chip Fryer)</u>			
77	Material	No	1	
78	Labour	No	1	
	<u>40A 3 pole 250V IP55 pedestal mounted (Combi steamer)</u>			
79	Material	No	1	
80	Labour	No	1	
	<u>40A 3 pole 250V IP55 flush mounted (Freezer)</u>			
81	Material	No	3	
82	Labour	No	3	
	<u>32A 3 pole 250V surface mounted IP55 (Hot water circulation pump)</u>			
83	Material	No	1	
84	Labour	No	1	
	Carried to Collection			R
	Section No. 4			
	Bill No. 3			
	Small Power and Lighting (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>32A 3 pole 250V surface mounted (Potato Peeler)</u>				
85	Material	No	1		
86	Labour	No	1		
	<u>32A 3 pole 250V surface mounted (18 liter Tilting pan)</u>				
87	Material	No	1		
88	Labour	No	1		
	<u>32A 3 pole 250V surface mounted (Servery equipment)</u>				
89	Material	No	2		
90	Labour	No	2		
	<u>40A 3 pole 250V surface mounted (Airconditioner)</u>				
91	Material	No	1		
92	Labour	No	1		
	<u>32A 3 pole 250V surface mounted (Airconditioner)</u>				
93	Material	No	2		
94	Labour	No	2		
	<u>32A 2 pole 250V surface mounted (Airconditioner)</u>				
95	Material	No	19		
96	Labour	No	19		
	<u>32A 3 pole 250V surface mounted IP55</u>				
97	Material	No	6		
98	Labour	No	6		
	<u>32A 2 pole 250V surface mounted IP55</u>				
99	Material	No	7		
	Carried to Collection				
	Section No. 4				
	Bill No. 3				
	Small Power and Lighting (Provisional)				
	RUBIQUANT				
	QUANTITY SURVEYORS				

R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

100	Labour	No	7		
	<u>32A 2 pole 250V surface mounted (Meat band saw)</u>				
101	Material	No	1		
102	Labour	No	1		
	<u>32A 2 pole 250V surface mounted</u>				
103	Material	No	17		
104	Labour	No	17		
	<u>32A 2 pole 250V surface mounted (Water feature)</u>				
105	Material	No	1		
106	Labour	No	1		
	<u>32A 2 pole 250V surface mounted (Hot water)</u>				
107	Material	No	16		
108	Labour	No	16		
	<u>20A 3 pole 250V surface mounted (Heat pump)</u>				
109	Material	No	2		
110	Labour	No	2		
	<u>20A 3 pole 250V surface mounted (Extractor fans)</u>				
111	Material	No	1		
112	Labour	No	1		
	<u>20A 2 pole 250V surface mounted (Extractor fans)</u>				
113	Material	No	41		
114	Labour	No	41		
	Carried to Collection				
	Section No. 4				
	Bill No. 3				
	Small Power and Lighting (Provisional)				
	RUBIQUANT				
	QUANTITY SURVEYORS				
				R	

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>20A 2 pole 250V surface mounted (Fire detection)</u>			
115	Material	No	2	
116	Labour	No	2	
	<u>20A 2 pole 250V surface mounted (Extractor fans)</u>			
117	Material	No	41	
118	Labour	No	41	
	<u>20A 2 pole 250V surface mounted (Ventilation & HVAC)</u>			
119	Material	No	42	
120	Labour	No	42	
	<u>PEDESTALS</u>			
	<u>Stainless steel pedestals shall be provided as indicated on the drawings to mount IP55 equipment isolators for the equipment</u>			
121	Material	No	6	
122	Labour	No	6	
	<u>LUMINAIRES</u>			
	<u>Supply, delivery and installation and mounted to round boxes including all fixings, brackets, supports, connectors, connections and lamps.</u>			
	<u>Type A: Open channel double tube fluorescent with 40W lamps and telescopic lamp holders</u>			
123	Material	No	30	
124	Labour	No	10	
	<u>Type B: Open channel single tube fluorescent with 40W lamp and telescopic lamp holders</u>			
125	Material	No	364	
	Carried to Collection			R
	Section No. 4			
	Bill No. 3			
	Small Power and Lighting (Provisional)			
	RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

126	Labour	No	161	
	<u>Type Be: Open channel single tube flourescent with 58W lamp and telescopic lamp holders, with 20% battery emergency standby backup</u>			
127	Material	No	36	
128	Labour	No	36	
	<u>Type C: Cast Aluminium indoor bulkhead luminaire (BLACK) with 2x9W compact flourescent lamps</u>			
129	Material	No	394	
130	Labour	No	224	
	<u>Type Ce: Cast Aluminium indoor bulkhead luminaire (BLACK) with 2x9W compact flourescent lamps, with 20% battery emergency standby backup</u>			
131	Material	No	8	
132	Labour	No	8	
	<u>Type D: 208W LED IP66) wide beam floodlight with cast aluminium case and polycarbonate diffusor, complete with lamp</u>			
133	Material	No	40	
134	Labour	No	11	
	<u>Type E: Cast Aluminium (IP66) outdoor bulkhead luminaire with complete with lamp</u>			
135	Material	No	21	
136	Labour	No	7	
	<u>Type M: Recessed mounted decorative luminaire with low brightness diffusor, with double 40W flourescent lamps and telescopic lamp holders</u>			
137	Material	No	287	
138	Labour	No	136	
	Carried to Collection			R
	Section No. 4			
	Bill No. 3			
	Small Power and Lighting (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>Type N: Recessed mounted decorative luminaire with double tube 37W LED lamps and telescopic lamp holders</u>			
139	Material	No	26	
140	Labour	No	9	
	<u>Type O: Totally enclosed, dust- and vapour-proof (IP56) luminaire with 40W single tube fluorescent lamp & polycarbonate diffuser</u>			
141	Material	No	91	
142	Labour	No	46	
	<u>Type P: Totally enclosed, dust- and vapour-proof (IP56) luminaire with double 40W LED lamps & polycarbonate diffuser</u>			
143	Material	No	52	
144	Labour	No	20	
	<u>Type Pe: Totally enclosed, dust- and vapour-proof (IP56) luminaire with 58W double tube fluorescent lamps & polycarbonate diffuser, with 20% battery emergency standby backup</u>			
145	Material	No	3	
146	Labour	No	3	
	<u>Type Q: Surface mounted down lighter with 2x37W LED lamps</u>			
147	Material	No	224	
148	Labour	No	123	
	<u>Type Qe: Surface mounted down lighter with 2x18W compact fluorescent lamps, with 20% battery emergency standby backup</u>			
149	Material	No	14	
150	Labour	No	14	
	Carried to Collection			R
	Section No. 4 Bill No. 3 Small Power and Lighting (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

<u>HAND DRIER</u>			
<u>2.5kW Automatic electrical stainless steel 220/240volt, 50/60hz hand drier. Air rate 30litres/ second, drying time 15 seconds. SABS approved, with Infra-red automatic sensing system, with safety cut-out.</u>			
169	Material	No	15
170	Labour	No	15
<u>EXTRACTOR FANS</u>			
<u>Toilet extraction fan connected to light circuit</u>			
171	Material	No	96
172	Labour	No	96
<u>POWER SKIRTING</u>			
<u>The supply, installation and connecting up 3 channel/compartement power skirting complete with all accessories, ends, bends etc.</u>			
<u>3 Compartment power skirting with covers</u>			
173	Material	m	1,548
174	Labour	m	1,548
<u>3 Compartment power skirting riser with covers</u>			
175	Material	m	475
176	Labour	m	475
<u>Power skirting ends</u>			
177	Material	No	318
178	Labour	No	318
<u>Power skirting bends</u>			
179	Material	No	382
Carried to Collection			
Section No. 4 Bill No. 3 Small Power and Lighting (Provisional) RUBIQUANT QUANTITY SURVEYORS			R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

180	Labour	No	382		
	<u>Power skirting T-off</u>				
181	Material	No	29		
182	Labour	No	29		
	<u>16A single normal switch socket outlet with cover in power skirting</u>				
183	Material	No	397		
184	Labour	No	397		
	<u>16A single dedicated switch socket outlet with cover in power skirting</u>				
185	Material	No	139		
186	Labour	No	139		
	<u>Telephone socket outlet point with cover in power skirting</u>				
187	Material	No	224		
188	Labour	No	224		
	<u>Data socket outlet point with cover in power skirting</u>				
189	Material	No	207		
190	Labour	No	207		
	<u>TV outlet point with cover in power skirting</u>				
191	Material	No	1		
192	Labour	No	1		
	<u>30A double pole isolator for A/C with cable outlet grommet</u>				
193	Material	No	1		
194	Labour	No	1		
	Carried to Collection				
	Section No. 4				
	Bill No. 3				
	Small Power and Lighting (Provisional)				
	RUBIQUANT				
	QUANTITY SURVEYORS				

R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

<p>Section No. 4 Bill No. 3 Small Power and Lighting (Provisional) RUBIQUANT QUANTITY SURVEYORS</p>			
<p>Carried to Collection</p>			<p>R</p>

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

206	Allow for general attendance on specialist executing the work	Item	
	<u>TELKOM AND IT SLEEVES INSTALLATION</u>		
207	Allow the Provisional Sum of R 500'000.00 (Five Hundred Thousand Rand) for the Telkom and IT Sleeves installation	Item	500,000.00
208	Allow for profit	Item	
209	Allow for general attendance on specialist executing the work	Item	
	<u>EARTHING SURVEY BY LIGHTNING SPECIALIST</u>		
210	Allow the Provisional Sum of R 20'000.00 (Twenty Thousand Rand) for the earthing survey by a Lightning Specialist	Item	20,000.00
211	Allow for profit	Item	
212	Allow for general attendance on specialist executing the work	Item	
	<u>Guarantee</u>		
213	Allow for a guarantee period of twelve months on the whole of the installation as per the specification	Item	
	<u>Maintenance</u>		
214	Allow for free maintenance during the guarantee period of the installation as per the specification	Item	
	<u>Drawings</u>		
215	Allow for 3 sets of operating and maintenance manuals and as-built drawings as per the specification	Item	
216	Allow for submission of 3 sets of shop drawings as specified	Item	
	<u>General Attendance</u>		
217	Allow for attendance on the sub-contractors	Item	
	Carried to Collection		
	Section No. 4		
	Bill No. 3		
	Small Power and Lighting (Provisional)		
	RUBIQUANT		
	QUANTITY SURVEYORS		
			R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 4

Bill No. 3

Small Power and Lighting (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

Carried Forward

R

Section No. 4

Bill No. 3

Small Power and Lighting (Provisional)

**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No		Quantity	Rate	Amount
	<u>SECTION NO 4</u>			
	<u>BILL NUMBER 4</u>			
	<u>LIGHTNING PROTECTION</u>			
	-WORK GROUP 160-			
	<u>NOTE 1:</u> Tenderers are advised to study the specification and will be held to have allowed for all the requirements of same when pricing the Bills of Quantities as no claims whatsoever in this regard will be entertained at a later date			
	<u>NOTE2:</u> For the purposes of tendering, only the total quantity shall be used in calculating the amount for inclusion in the tender at the tendered rate. The quantities in the description column immediately below the item represent the quantities per section for information and administration only			
	<u>NOTE 3:</u> All items in this section shall be deemed to fall into Work Group No 160 for Haylett Formula purposes			
	<u>LIGHTNING PROTECTION</u>			
	<u>Small Power</u>			
	<u>Conductors</u>			
	<u>50mm² PVC insulated copper earth conductor drawn into conduit</u>			
1	Material	m	486	
2	Labour	m	486	
	Carried to Collection			R
	Section No. 4 Bill No. 4 Lightning Protection (Provisional) RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

	<u>10 mm Diameter bare aluminium alloy conductor installed on wall with fixing brackets at max 500mm centres (horizontal)</u>		
3	Material	m	18
4	Labour	m	18
	<u>10 mm Diameter bare aluminium alloy conductor installed on wall with fixing brackets at max 500mm centres (vertical)</u>		
5	Material	m	243
6	Labour	m	243
	<u>10mm Diameter bare aluminium alloy conductor installed on parapet wall with fixing brackets at max 500 mm centres (ridge conductor)</u>		
7	Material	m	459
8	Labour	m	459

Carried to Collection

R

Section No. 4
 Bill No. 4
 Lightning Protection (Provisional)
RUBIQUANT
QUANTITY SURVEYORS

<u>PVC Conduit and Accessories</u>			
<u>Conduit surface mounted to brickwork, concrete, steel or ceiling void or cast into concrete or built or chased into brickwork</u>			
<u>25mm Diameter galvanised</u>			
9	Material	m	505
10	Labour	m	505
<u>Earth Electrode</u>			
<u>Steel core reinforced copper rod complete with brass couplings</u>			
<u>1800mm x 16mm Diameter earth electrode (250 micron copperweld) with driving cap, driven into ground to 500mm below finished ground level</u>			
11	Material	No	29
12	Labour	No	29
<u>Termination of earthing conductor as specified</u>			
13	Aluminium conductor to steel guttering	No	20
14	Termination on earth electrode	No	29
15	Aluminium ridge conductor to aluminium ridge conductor	No	20
16	Aluminium ridge conductor to aluminium down conductor	No	29
17	50mm ² Aluminium conductor in short lengths not exceeding 600mm in connection between roof and guttering, including brass bolts and nuts	No	49
18	50mm ² Aluminium conductor in short lengths not exceeding 1500mm in connection between roof and roof, including brass bolts and nuts	No	49
Carried to Collection			
Section No. 4 Bill No. 4 Lightning Protection (Provisional) RUBIQUANT QUANTITY SURVEYORS			R

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

<u>Conduit boxes and fittings for test joints</u>				
<u>Wall boxes, as specified, placed in position for casting into concrete, built into or chased into brickwork or surface mounted including locknut and bushes</u>				
19	50mm Brass coupling test joint in recessed or surface mounted 100 x 100 x 100mm outlet box complete with steel blank cover plate, as specified	No	29	
<u>Inspection Pits</u>				
20	Polyurethane or Concrete Inspection pits size 150mm x 150mm x 200mm high complete as specifications	No	5	
<u>Wall mounted on insulators earth bar 6mm x 30mm x 1000mm with 10 x M10 copper bolts, nuts & 2 washers each</u>				
21	Material	No	2	
22	Labour	No	2	
<u>Steel Lightning Protection Pilons</u>				
<u>32m High Galvanised tapered steel lightning protection pilons with concrete plinths designed by a structural engineer and erected on Class C concrete base as per drawing and specifications, including excavations, carting away, etc.</u>				
23	Material	No	2	
24	Labour	No	2	
<u>General Items</u>				
<u>Testing and Commissioning</u>				
25	Allow for testing and commissioning of the whole of the installation in accordance with the Local Authorities/Architect's requirements and issue of certificate of compliance by an accredited person.			Item
<u>Drawings</u>				
26	Allow for 3 sets of operating and maintenance manuals and as-built drawings as per the specification			Item
Carried to Collection				R
Section No. 4				
Bill No. 4				
Lightning Protection (Provisional)				
RUBIQUANT				
QUANTITY SURVEYORS				

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

27 Allow for submission of 3 sets of shop drawings as specified

Item

Guarantee

28 Allow for a guarantee period of twelve months on the whole of the installation as per the specification

Item

Maintenance

29 Allow for free maintenance during the guarantee period of the installation as per the specification

Item

Carried to Collection

R

Section No. 4
Bill No. 4
Lightning Protection (Provisional)
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 4

Bill No. 4

Lightning Protection (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

261

262

263

264

265

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 4

Lightning Protection (Provisional)

RUBIQUANT

QUANTITY SURVEYORS

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No		Quantity	Rate	Amount
	<u>SECTION NO 4</u>			
	<u>BILL NUMBER 5</u>			
	<u>BUILDERS WORK</u>			
	<u>MANHOLES</u>			
1	Telkom manhole, prefab manhole 1000mm top inner diameter x 900mm deep including steel telkom lid set in concrete apron, bottom layer to receive 25mm chipstone 100mm thick	No	10	
2	Computer Cables Manhole 1000mm top inner diameter x 900mm deep complete with medium duty cover, bottom layer to receive 25mm chipstone 100mm thick	No	3	
3	Inspection Manhole 1000mm top inner diameter x 900mm deep complete with medium duty cover, bottom layer to receive 25mm chipstone 100mm thick	No	1	
	<u>OPENINGS THROUGH EXISTING WALLS, ETC</u>			
	<u>Breaking out for and forming plain openings through brick walls to receive powerskirting, including making good to match new finishes</u>			
4	Opening not exceeding 1m ² in one brick wall	No	213	
	<u>CONCRETE</u>			
	<u>REINFORCED CONCRETE</u>			
	<u>25 Mpa/19mm Concrete</u>			
5	Plinth under Emergency Generator	m3	2	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 5			
	Builders Work (Provisional)			
	RUBIQUANT			
	QUANTITY SURVEYORS			

SECTION 5:

EPWP-NYC AND CPG

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No	Quantity	Rate	Amount
<u>SECTION NO 5</u>			
<u>BILL NUMBER 1</u>			
<u>EMPLOYMENT AND TRAINING OF LABOUR ON EPWP INFRASTRUCTURE PROJECTS</u>			
<u>PREAMBLES</u>			
Tenders are advised to study Additional Specification SL: Employment and Training of Labour on Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service, as bound elsewhere in the Bills of Quantities, and then price this Bill accordingly			
<u>EMPLOYMENT AND TRAINING OF LABOUR</u> Target : 30 Youth Workers			
<u>TRAINING OF YOUTH WORKERS (TARGET OF 30 YOUTH WORKERS)</u>			
<u>Skills development and technical training for workers (ref SL 11.01.01):</u>			
1			660,000.00
Allow the sum of R 660'000.00 (Six Hundred and Sixty Thousand Rand)Skills development and technical training for youth workers for an average of 45 days (Ref SL 11.01.01)		Item	
2			
Add profit on above if required		Item	
3			
Allow for attendance on the above, if any		Item	
<u>Life Skills Training</u>			
4			290,000.00
Allow the sum of R 290'000.00 (Two Hundred and Ninety Thousand Rand) for Orientation and life skills training for 20 days (Ref. SL 11.02.01)		Item	
5			
Add profit on above if required		Item	
6			
Allow for attendance on the above, if any		Item	
Carried to Collection			R
Section No. 5 Bill No. 1 EMPLOYMENT AND TRAINING OF LABOUR RUBIQUANT QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

7	Payment reduction due to not meeting the target as in SL 11.01.02 (Rate of R2'000.00 per Youth Worker)	No		
	<u>Employment of Youth Workers</u>			
8	Allow the sum of R 198'000.00 (One Hundred and Ninety Eight Thousand Rand) for Employment of youth workers (Ref. SL 11.02.01)	Item		198,000.00
9	Add profit on above if required	Item		
10	Allow for attendance on the above, if any	Item		
	<u>Provision of EPWP designed overalls to Youth Workers</u>			
11	Allow the sum of R 24'000.00 (Twenty Four Thousand Rand) for supply EPWP Designed overalls to youth workers (Ref. SL 11.03.01)	Item		24,000.00
12	Add profit on above if required	Item		
13	Allow for attendance on the above, if any	Item		
	<u>Provision of Small Tools for youth workers</u>			
14	Allow the sum of R 27'000.00 (Twenty Seven Thousand Rand) for supply of small tools to youth workers. Specification to be supplied by the EPWP-NYS Service Provider for the respective trades. (Ref. SL 11.04.01)	Item		27,000.00
15	Add profit on above if required	Item		
16	Allow for attendance on the above, if any	Item		
	<u>Appointment of Youth Team Leaders</u>			
17	Allow the sum of R 18'000.00 (Eighteen Thousand Rand) for supply of small tools to youth workers. Specification to be supplied by the EPWP-NYS Service Provider for the respective trades. (Ref. SL 11.04.01)	Item		18,000.00
18	Add profit on above if required	Item		
19	Allow for attendance on the above, if any	Item		
	Carried to Collection			
	Section No. 5			
	Bill No. 1			
	EMPLOYMENT AND TRAINING OF LABOUR			
	RUBIQUANT			
	QUANTITY SURVEYORS			
			R	

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Liaison with Service provider

20	Liaison with service provider (ref SL 11.08)	Hrs	36	
----	--	-----	----	--

CLO Allowance

21	Provide a budgetary allowance of One Million Two Hundred Rand (R 1'200'000.00) for CLO complete	Item		1,200,000.00
----	---	------	--	--------------

Project Facilitator

22	Provide a budgetary allowance of One Million Rand (R 1'000'000.00) for Project Facilitator complete	Item		1,000,000.00
----	---	------	--	--------------

Carried to Collection

R

Section No. 5
Bill No. 1
EMPLOYMENT AND TRAINING OF LABOUR
RUBIQUANT
QUANTITY SURVEYORS

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 5

Bill No. 1

EMPLOYMENT AND TRAINING OF LABOUR

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

269

270

271

Carried Forward to Summary of Section No. 5

R

Section No. 5

Bill No. 1

EMPLOYMENT AND TRAINING OF LABOUR

RUBIQUANT

QUANTITY SURVEYORS

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Item No	Quantity	Rate	Amount
<u>SECTION NO 5</u>			
<u>BILL NUMBER 2</u>			
<u>COMMUNITY PARTICIPATION GOAL</u>			
<u>PREAMBLES</u>			
Note to tenderers: As CPGs may not provide any bidder a competitive advantage. Provisional amounts and fixed percentages for profit and attendance have been provided. Only the provisional amount will be adjusted once the awarded tender amount and/or the beneficiaries have been appointed, and the final values have been ascertained.			
<u>MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS</u>			
1			
Provision is made for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.2. Allowance for monitoring and monthly reporting on material purchased from Local Building Material Manufacturers by main contractor and subcontractors based on determination by PQS taking into account specific project variables			
	Item		
2			
Add profit on above if required			
	Item		
3			
Allow for attendance on the above, if any			
	Item		
<u>MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS</u>			
4			
Provision is made for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.3. Allowance for monitoring and monthly reporting on material purchased from Local Building Material Suppliers by main contractor and subcontractors based on determination by PQS taking into account specific project variables			
	Item		
5			
Add profit on above if required			
	Item		
Carried to Collection			
			R
Section No. 5			
Bill No. 2			
Community Participation Goal			
RUBIQUANT			
QUANTITY SURVEYORS			

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

6	Allow for attendance on the above, if any	Item	
	<u>MINIMUM TARGETED LOCAL LABOUR SKILLS DEVELOPMENT</u>		
7	Provision is made for the Minimum Targeted Local Labour Skills Development CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.4. This allowance is for the cost for a suitably qualified and experienced training service provider appointed by the main contractor including monitoring and monthly reporting.	Item	
8	Add profit on above if required	Item	
9	Allow for attendance on the above, if any	Item	
	<u>MINIMUM TARGETED ENTERPRISE DEVELOPMENT</u>		
10	A provisional amount has been allowed for in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.5. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises including monitoring and monthly reporting.	Item	
11	Add profit on above if required	Item	
12	Allow for attendance on the above, if any	Item	
	<u>MINIMUM TARGETED SKILLS DEVELOPMENT GOALS</u>		
13	A provisional amount has been allowed for the Minimum Targeted Development CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.6. <ul style="list-style-type: none"> • stipends payable to the beneficiaries • appointment of training coordinator • appointment of mentor (where applicable) • appointment of training service providers • other additional costs as per table 3 of the Standard • monitoring and monthly reporting 	Item	
14	Add profit on above if required	Item	
	Carried to Collection		R
	Section No. 5 Bill No. 2 Community Participation Goal RUBIQUANT QUANTITY SURVEYORS		

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

15 Allow for attendance on the above, if any

Item

LABOUR INTENSIVE PARTICIPATION GOAL

16 Labour Intensive Participation Goal - Allowance for monthly reporting of labour intensive works by main contractor based on determination by PQS taking into account specific project variables. Allowance for monitoring and monthly reporting on Works executed by means of Labour Intensive methods by main contractor and subcontractors based on determination by PQS taking into account specific project variables

Item

17 Allowance for profit all inclusive of associated costs to the contractor for implementation.

Item

Carried to Collection

R

Section No. 5
Bill No. 2
Community Participation Goal
**RUBIQUANT
QUANTITY SURVEYORS**

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Section No. 5

Bill No. 2

Community Participation Goal

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

273

274

275

Carried Forward to Summary of Section No. 5

R

Section No. 5

Bill No. 2

Community Participation Goal

RUBIQUANT

QUANTITY SURVEYORS

**NEWCASTLE: REPAIR AND RENOVATIONS TO
DECENTRALISED TRAINING FACILITY FOR SAPS**

Bill No	<u>SECTION SUMMARY - EPWP-NYS</u>	Page No	Amount
1	EMPLOYMENT AND TRAINING OF LABOUR	272	
2	Community Participation Goal	276	
	Carried to Final Summary		R
	Section No. 5 RUBIQUANT QUANTITY SURVEYORS		

FINAL SUMMARY

PART B:

MECHANICAL INSTALLATION

Item	Description	Quantity	Rate	Amount
NEWCASTLE SAPS - VAN ECK BUILDING REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY AIR CONDITIONING & VENTILATION INSTALLATION PART 5 (CPAP WORK GROUP 170).				
VRV HEAT RECOVERY AIR CONDITIONING INDOOR UNITS AS PER SPECIFICATION AND DRAWINGS NO m304147-AC1 & AC2				
1	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 11.5kW.	6	No	
2	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 9.7kW.	4	No	
3	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 8.15kW.	2	No	
4	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 7.65kW.	2	No	
5	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 6.35kW.	4	No	
6	Ceiling suspended "Round Flow cassette" heat recovery VRV Unit minimum cooling duty 4.7kW.	9	No	
7	Standard decoration panel	27	No	
TO COLLECT				R
PAGE NO 1 PART 5 - BILL NO 1 AIRCONDITIONING & VENTILATION				

Item	Description	Quantity	Rate	Amount
	DEHUMIDIFIER			
37	Floor standing 25 litres/hr (KDY-25) dehumidifier complete with electrical connection, drain pipework, exhaust ducting etc.	8	No	
	FRESH AIR SUPPLY FANS			
38	Axial Flow Fan max 1440RPM c/w 2 off podded silencers, mounting feet, flexible collar connections, anti vibration spring mounts and supprt brackets and wiring connection with local on/off switch	1	No	
39	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 180l/s @ 200pa	4	No	
40	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 160l/s @ 200pa	1	No	
41	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 135l/s @ 200pa	2	No	
42	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 65l/s @ 200pa	1	No	
43	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 30l/s @ 200pa	3	No	
	EXTRACT AIR FANS			
44	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 690l/s @ 150pa	1	No	
45	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 200l/s @ 150pa	1	No	
46	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 125l/s @ 150pa	1	No	
	TO COLLECT			R
PAGE 4 PART 5 - BILL NO 1 AIRCONDITIONING & VENTILATION				

Item	Description	Quantity	Rate	Amount
47	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 100/s @ 150pa	7	No	
48	TD Silent type Inline Tube Fan complete with flexible connection collars, supports, anti vibration mounts and wiring connection with local on/off switch. Duty 75/s @ 150pa	1	No	
DUCTING - UNISULATED				
All fixing and supports as specified as per SANS 1238 to be included in ducting rates				
RECTANGULAR DUCTING				
49	1200 x 600	4	m	
50	550 x 550	4	m	
51	550 x 350	7	m	
52	500 x 350	6	m	
53	375 x 250	5,5	m	
54	350 x 350	8	m	
55	300 x 350	7	m	
56	300 x 300	3,5	m	
57	300 x 100	6	m	
58	250 x 250	8	m	
59	200 x 200	42	m	
60	150 x 150	2	m	
EXTRA OVER FITTINGS				
90 Deg bend				
61	1200 x 600	1	No	
62	550 x 550	1	No	
63	550 x 350	1	No	
64	375 x 250	1	No	
65	250 x 250	1	No	
TO COLLECT				R
PAGE 5 PART 5 - BILL NO 1 AIR CONDITIONING & VENTILATION				

Item	Description	Quantity	Rate	Amount
	EXTRA OVER FITTINGS			
	90 Deg bend			
88	200 Dia	3	No	
89	150 Dia	2	No	
90	100 Dia	1	No	
	Transformation to smaller size of fan or duct			
91	200 Dia	1	No	
92	150 Dia	1	No	
	Stop End			
93	200 Dia	2	No	
94	150 Dia	2	No	
95	100 Dia	2	No	
	Spigot including mounting plate			
96	300 Dia	6	No	
97	250 Dia	7	No	
98	200 Dia	4	No	
99	100 Dia	21	No	
	Unisulated Flexible Ducts including 2 clamps and duct tape			
100	300 Dia	9	m	
101	250 Dia	11	m	
102	200 Dia	6	m	
103	100 Dia	33	m	
	AIR TERMINALS			
	Aluminium weather louvre type WL 50mm blade spacing, natural anodised including bird mesh screen			
104	1200 x 600	1	No	
105	550 x 550	1	No	
	TO COLLECT			R
	PAGE 7			
	PART 5 - BILL NO 1			
	AIR CONDITIONING & VENTILATION			

Item	Description	Quantity	Rate	Amount
106	Aluminium weather louvre type RARB 19mm ribbed blade spacing, natural anodised including bird mesh screen 300 x 300	5	No	
107	250 x 250	3	No	
108	200 x 200	9	No	
109	150 x 150	3,00	No	
Fresh Air Supply Grilles and Diffusers				
Constant volume circular steel painted white ceiling mounted supply diffuser complete with mounting brackets				
110	300 Dia	6	No	
111	250 Dia	3	No	
112	200 Dia	2	No	
113	100 Dia	9	No	
Extract Air Grilles				
Aluminium return air type grille 19mm blade spacing wall mounted painted white				
114	200 x 200	1	No	
Aluminium return air type grille 19mm blade spacing mounted directly to ducting painted matt black				
115	375 x 250	3	No	
Aluminium return air type grille 19mm blade spacing mounted to ceiling connected to ducting painted white				
116	250 x 250	1	No	
117	200 x 200	3	No	
Constant volume circular steel painted white ceiling mounted supply diffuser complete with mounting brackets				
118	100 Dia	6	No	
TO COLLECT				R
PAGE 8 PART 5 - BILL NO 1 AIR CONDITIONING & VENTILATION				

Item	Description	Quantity	Rate	Amount
NEWCASTLE SAPS - VAN ECK BUILDING REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY BILL NO 2 DOMESTIC HOT WATER INSTALLATION (CPAP WORK GROUP 170).				
1	Strip and remove the existing 2 off hot water storage vessels from site.	Sum		
SUPPLY AND INSTAL THE FOLLOWING NEW EQUIPMENT AND COMPONENTS AT EXISTING GROUND FLOOR HOT WATER PLANTROOM				
2	AIRCO or other approved air to water heat pumps capable of 967 litres per hour flow having a 45 kW heating capacity with a 10.8kW power consumption, c/w built in circulating pump, thermostat and	2	No	
3	AIRCO or other approved air to water heat pumps capable of 817 litres per hour flow having a 30 kW heating capacity with a 9.3kW power consumption c/w built in circulating pump, thermostat and	1	No	
4	Inline booster pump duty 11,1l/s to ensure 600kPa pressure in the hot water systems c/w all pressure switches, flow switches and controls to ensure correct operation as per suppliers recommendations.	1	No	
5	Inline booster pump duty 5.87 l/s to ensure 600kPa pressure in the heating water systems c/w all pressure switches, flow switches and controls to ensure correct operation as per suppliers recommendations.	1	No	
6	Inline hot water circulating pump duty 1.4l/s @ system resistance	2	No	
7	4500 Litre Vetrical maximum 2,1m high hot water storage vessels complying to pressure regulations c/w all connections, pressure guages, saftey valve, dial thermometer, 50mm thick insulation and 0.5mm stainless steel cladding.	2	No	
8	Control panel c/w all controls, contactors, timers and safties to ensure correct operation af both domestic hot water and heating hot water system	1	No	
TO COLLECT			R	
PAGE 1				
BILL NO 2				
DOMESTIC HOT WATER INSTALLATION				

Item	Description	Quantity	Rate	Amount
<p>NEWCASTLE SAPS - VAN ECK BUILDING</p> <p>REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY</p> <p>BILL NO 3</p> <p>FIRE APPLIANCES INSTALLATION</p> <p>(CPAP WORK GROUP 148).</p> <p>Refer to PW371-A and Specification and Drawings.</p> <p>FIRE PROTECTION</p> <p>Fire Water Reticulation Systems shall comply as per SANS 10252-1 2012 and buried pipelines SANS 1200L</p> <p>FIRE HYDRANTS</p> <p>All Fire Hydrants shall comply with the requirements of SANS 1128-1</p> <p>Supply, install test and commission 80mm x 65mm Right Angled Tamper Proof Hydrant with single lug outlet and supplied complete with Tee key for opening valve. With stand-up pipe galvanized 10mm pipe and bevelled anchor block complete</p> <p>FIRE HYDRANT PEDASTALS</p> <p>Unreinforced concrete hydrant pedestal 900mm high cast around vertical pipe with bottom 300mm below ground, 300 x 300mm square base and tapering to octagonal shaped top 200 x 200mm overall including necessary excavation, formwork and two coats of paint to exposed</p> <p>FIRE HOSE REEL</p> <p>All fire hose reel for fire hydrants shall comply with requirements of SANS 543, and shall be installed in accordance with SANS 10105-1 and SANS 10400-W and the Department's Document GP/M1 Rev 1. Lockable fire hose reel and fire extinguisher cabinets will be installed for safety against vandalism. Fire extinguishers, fire hose reels and fire hydrants will be installed according to the requirements of the current SANS 10400-T: 2011 3rd Edition of 2011 as mitigation measures in accordance with the risk associated with such a building classification A3 place of instruction in accordance with SANS 10400-A: 2010. Additional measures shall be taken to install fire extinguishers in the classrooms enclosed in vandalproof</p> <p>Hose reel with 65mm diameter non-percolating, rot proof, UV and weather resistant flat 30m hose rated at 15 Bar working pressure, chromium plated stopcock, shut-off nozzle and wall bracket all to SANS 543, complete with connections to 100mm HDPE class 12 pipe.</p>				
1		No	4	
2		No	4	
3		No	4	
				R
<p>PAGE 1 BILL NO 3 FIRE APPLIANCE INSTALLATION</p>				

Item	Description	Quantity	Rate	Amount
	Photo luminescent chromadek fire equipment and direction signage location signage and warning notices in accordance with SANS 1186-1:2008, and incorporating pictographs securley fixed to and including foundation. 2m high galvanised pole. etc indicated on mechanical drawings			
11	Emergency Assembly point size 600 x 600mm	No 4		
12	Hydrant connection, booster connection and arrow size 570 x 190mm	No 5		
13	Hydrant connection, fire hose reel and arrow size 570 x 190mm	No 5		
WATER SUPPLIES TO FIRE APPLIANCES				
	Class 12 HDPE fire pipe with solvent welded joints laid in trenches minimum 800mm deep, including trenching and backfilling			
14	110mm diameter pipe laid in and including trenches	m 486		
15	76mm diameter pipe laid in and including trenches	m 10		
16	25mm diameter pipe laid in and including trenches	m 48		
	Class 2 copper water piping in accordance with SANS 460, including mounting brackets, supports all as specified and as per drawing			
17	76mm Diameter	m 15		
18	54mm Diameter	m 115		
	Extra over for class 2 copper pipes for capillary fittings			
19	54mm Fittings	No 65		
TESTING AND COMMISSIONING				
20	Allow for commissioning and testing of entire Fire Protection installation after completion to 10 Bar pressure maintained for not less that 1 hour	1 Item		
21	Allow for Non-destructive dye penetration test of weld work of pipes every 5 meters.	1 Item		
GUARANTEE AND MAINTENANCE				
22	Provision of Guarantee of equipment and 12 month maintenance period from first delivery	1 Item		
OPERATING AND MAINTENANCE PROCEEDURES				
23	Compilation and submission of 4 off Operation & Maintenance Manuals and procedures for the Fire Protection installation	1 Item		
TO COLLECT				R
PAGE 2				
BILL NO 3				
FIRE APPLIANCE INSTALLATION				

Item	Description	Quantity	Rate	Amount
NEWCASTLE SAPS - VAN ECK BUILDING REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY BILL NO 4 FIRE DETECTION & ALARM EVACUATION INSTALLATION (CPAP WORK GROUP 170).				
EQUIPMENT				
A	ZITON ZP3 4L CONTROL PANEL (Surface Mounted)	No	1	
B	BATTERIES (LEAD ACID TYPE)	No	2	
C	OPTICAL DETECTORS (Ceiling Mounted)	No	250	
D	HEAT FLAME DETECTORS (Ceiling Mounted)	No	8	
E	OPTICAL DETECTORS WITH EXTENDED LIGHT (Void)	No	4	
F	DETECTOR BASES	No	262	
G	CALL POINT (Break Glass)	No	25	
H	LOOP SOUNDERS	No	25	
I	LINE ISOLATORS + BASE	No	10	
J	ADDRESSABLE RELAY (Interface)	No	1	
K	FIRE RETARDANT CABLE (To SANS 10139 Classification PH30) 1,00 MM ²	M	2500	
SUPPLY AND INSTALL				
L	TRANSMITTER UNIT, COMPLETE FOR DEDICATED LANDLINE LINK TO LOCAL AUTHORITY FIRE DEPARTMENT CONTROL ROOM	No	1	
WIREWAYS				
M	SUPPLY AND INSTALL SURFACE PVC "EGADUCT" YT1 (Screw Fixing) AND ALL ACCESSORIES INCLUDING FIXING BENDS, TERMINATIONS, DRAW BOXES ETC. SURFACE MOUNTED, CONDUIT C/W DRAW WIRE .	M	2500	
TO COLLECTION				R
PAGE 1 BILL NO 4 FIRE DETECTION & ALARM EVACUATION				

Item	Description	Quantity	Rate	Amount
NEWCASTLE SAPS - VAN ECK BUILDING REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY BILL NO 5 KITCHEN UPGRADE (CPAP WORK GROUP 170).				
Supply and install kitchen equipment as specified and as per drawings complete with electrical connections, water connections and drains.				
1	Wash hand basin	No	4	
2	Single bowl pre-rinse sink 1650 x 650 x 910mm high	No	2	
3	Hood type dishwasher	No	1	
4	Stainless steel wall mounted tubular pot rack 2000 x 400mm	No	1	
5	DCBPS - 2250 - Double centre bowl pot sink 2250 x 650 x 915	No	1	
6	VPS-L Prep sink 1850 x 650 x 910mm high	No	1	
7	VPS-R Prep sink 1850 x 650 x 910mm high	No	1	
8	VR - 9/8 - Crockery rack	No	2	
9	DCBPS - 2250 - Double centre bowl pot sink 2250 x 650 x 915	No	1	
10	SWB - 1650 stainless steel table complete with splashback to rear 1650 x 650 x 910mm high	No	10	
11	SWB - 2250 stainless steel table complete with splashback to rear 2250 x 650 x 910mm high	No	1	
12	Stainless steel wall mounted shelf 2000 x 500	No	1	
13	Camshelving 4 shelf 1220 x 610 x 1830mm high	No	9	
14	Camshelving 4 shelf 1070 x 610 x 1830mm high	No	1	
15	Econo shelving 5 shelf 1120 x 380mm	No	11	
16	Econo shelving 5 shelf 820 x 380mm	No	6	
17	Table mounted hand operated chip cutter	No	1	
TO COLLECT				R
PAGE 1 BILL NO 5 KITCHEN UPGRADE				

Item	Description	Quantity		Rate	Amount
18	First Aid box in office	No	1		
19	Fire blanket	No	1		
20	Unheated stainless steel serving counter 1105 x 750 x 910mm high	No	5		
21	Electric deep fryer four pans c/w with 4 mech frying baskets	No	1		
22	135l Electric oil jacketed boiling pan	No	1		
23	TP 80 Electric tilt frying pan 80 litre capacity	No	1		
24	FTG-10 Electric ribbed griller	No	1		
25	R-E3 3 Solid top electric range with oven	No	1		
26	BT60-4 Open burner gas with 4 burners	No	1		
27	Comenda Prime Line 48 litre hooded dishwasher	No	1		
28	Deluxe Toaster	No	1		
29	Conveyor Toaster	No	1		
30	5 Pan electric Bain Marie 1785 x 750 x 910mm High	No	2		
31	25 Litre wall mounted hot water boiler	No	2		
32	30 L Industrial Microwave 1000w	No	1		
33	Table top mixer	No	1		
33	4900 x 2600 x 600mm high cyclovent extract canopy complete with ducting to roof	No	1		
34	Axial flow extract fan duty 6.36m³/s c/w 2 off Melanix lined podded sound attenuators, anti vibration mounts and electrical	No	1		
		TO COLLECT		R	
PAGE 2 BILL NO 5 KITCHEN UPGRADE					

Item	Description	Quantity		Rate	Amount
<p>NEWCASTLE SAPS - VAN ECK BUILDING</p> <p>REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY</p> <p>BILL NO 6</p> <p>KITCHEN COLD AND FREEZER ROOM INSTALLATION</p> <p>(CPAP WORK GROUP 172).</p> <p>Refer to Specification and Drawings in Separate volume</p>					
COLD ROOM					
1	Measured on site to suit existing cold room designed for conditions as set out in the specifications including floor, walls, door, 100mm dial thermometer and roof as per drawings. Approximate size of existing cold room structure 4700 x 2400 x 2800mm High 100mm thick chromadek clad polyurethane insulated panels and roof.	No	1		
2	Condensing unit and control panel complete with and including epoxy powder coated cabinet with lockable door as per specification Refrigeration capacity 3.66kW	No	1		
3	Ceiling mounted evaporator with insulated interconnecting refrigerant piping and cables, valves fittings and insulated drain as per specification, duty 3.66kW	No	1		
FREEZER ROOM					
4	Measured on site to suit existing freezer room designed for conditions as set out in the specifications including floor, walls, door, 100mm dial thermometer and roof as per drawings. Approximate size of existing cold room structure 2350 x 2400 x 2800mm High 100mm thick chromadek clad polyurethane insulated panels and roof.	No	1		
5	Condensing unit and control panel complete with and including epoxy powder coated cabinet with lockable door as per specification Refrigeration capacity 5.32kW	No	1		
6	Ceiling mounted evaporator with insulated interconnecting refrigerant piping and cables, valves fittings and insulated drain as per specification, duty 5.32kW	No	1		
REFRIGERATION CONTROL PANEL					
7	Combined Control Panel for both Cold and Freezer Rooms.	No	1		
REFRIGERATION AND COLD ROOM					

R

Item	Description	Quantity	Rate	Amount
NEWCASTLE SAPS - VAN ECK BUILDING REPAIRS & RENOVATIONS TO DECENTRALISED TRAINING FACILITY BILL NO 7 LAUNDRY EQUIPMENT (CPAP WORK GROUP 170).				
	Supply and install laundry equipment as per specifications and drawing c/w electrical connections, water connection, drain connection and exhaust ducting			
1	approved	No	2	
2	Speed queen or other approved 23kg front loading tumble dryer c/w exhaust ducting to outside.	No	2	
3	SST-2250 - Stainless steel table complete with galvanised under shelf 2250 x 750 x 915mm High	No	4	
	TO COLLECT			R
PAGE 1 BILL NO 7 LAUNDRY EQUIPMENT				

Item	Description	Quantity		Rate	Amount
BILL	LAUNDRY EQUIPMENT				
COLLECTION					
Page 1					
Page 2					
TOTAL TENDER PRICE TRANSFERRED TO FORM OF TENDER					
	TO COLLECT			R	
PAGE 3 BILL NO 7 LAUNDRY EQUIPMENT					