

PART 2: PRICING DATA

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C2.1 Pricing instructions: Option B

1. The *conditions of contract*

1.1. How the contract prices work and assesses it for progress payments

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 and 2013 (ECC) Option B states:

**Identified
and defined
terms**

11

11.2

(21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.

(28) The Price for Work Done to Date is the total of

- the quantity of the work which the *Contractor* has completed for each item in the Bill of Quantities multiplied by the rate and
- a proportion of each lump sum which is the proportion of the work covered by the item which the *Contractor* has completed.

Completed work is work without Defects which would either delay or be covered by immediately following work.

(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

1.2. Function of the Bill of Quantities

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

1.3. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract (June 2005) Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

Historically bill of quantities based contracts in South Africa have been influenced by the different approaches of the civil engineering and building sectors of the industry through their respective discipline based standard forms of contract and methods of measurement. This is particularly apparent in the approach to the Preliminary and General bill. On the other hand, because ECC caters for a number of disciplines in the same contract, including electrical works, a different approach not currently found in local methods of measurement to the Preliminary & General bill items may have been used.

The NEC approach to the P & G bill assumes use will be made of method related charges for Equipment applied to Providing the Works based on durations shown in the Accepted Programme, fixed charges for the use of Equipment that is required throughout the construction phase, time related charges for people working in a supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill.

2. Measurement and payment

2.1. Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre

MPa	megapascal
No.	number
Prov sum ¹	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

2.2. General assumptions

- 2.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 2.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 2.2.3. Clause 63.13 in Option B provides that these rates and Prices may be used as a basis for assessment of compensation events instead of Defined Cost.
- 2.2.4. Where this contract requires detailed drawings, designs or other information to be provided, and no rates or prices are included in the *bill* specifically for such matters, then the *Contractor* is deemed to have allowed for all costs associated with such requirements within the tendered rates and Prices in the Bill of Quantities.
- 2.2.5. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*. If a number of items are grouped together for pricing purposes, this will be treated as a single lump sum.
- 2.2.6. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and

¹ Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary. This is because tenderers cannot programme effectively for unknown scopes of work

certified for payment by the *Project Manager* at each assessment date will be used for determining payments due and not the quantities given in the Bill of Quantities.

- 2.2.7. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. More detail regarding the extent of the work entailed under each item is provided in the Works Information.

2.3. Departures from the *method of measurement*

2.4. Amplification of or assumptions about measurement items

For the avoidance of doubt the following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

C2.2 The *bill of quantities*

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>BILL NO.1 : PRELIMINARIES</u>				
	<u>SECTION NO. 1: PRELIMINARIES</u>				
	<u>NOTE</u>				
	Tenderers are referred to the Measurement and Payment Clause (Clause 8) of SANS 1200A (General) document for the full intent and meaning of each clause thereof which are hereinafter referred to by clause number and heading only				
	<u>FIXED CHARGE ITEMS</u>				
1.1	<u>Contractual Requirements</u>				
	Contractual requirements for the provision of all sureties, Insurance of the works and Plant, Third Party Liability Insurance, Unemployment and any other statutory requirements.	Item	1		
1.2	<u>Establishment of Facilities on Site</u>				
	<u>Facilities for the Contractor</u>				
1.2.1	Storage sheds/ yards	Item	1		
1.2.2	Ablution and latrine facilities	Item	1		
1.2.3	Tools and equipment	Item	1		
1.2.4	Access	Item	1		
1.2.5	Plant	Item	1		
1.2.6	PPE for Contractors staff, suppliers, subcontractors and visitors	Item	1		

1.2.7	Forward Insurance Cover				
1.3	Other fixed-charge obligations (including Construction & Materials Management Function)	Item	1		
1.4	Removal of Contractor's site establishment on completion	Item	1		
1.5	Provision of a Safety Plan in terms of OHS Act and Safety Regulations. This should include for Rail, Gas, Asbestos pipes and dust, Petroleum, Explosive dust traffic control, hazardous edge heights next to Jetty and all types of under-and above ground services.	Item	1		
	<u>TIME-RELATED ITEMS</u>				
1.6	Contractual requirements				
1.6.1	(a) Management and implementation of construction regulations 2003	Months	15		
	(Including Contractors allowance to comply with Safety, Health, Environment and quality requirements in accordance with the particular specifications and the Environmental Management Plan)				
1.6.2	(b) Operation and maintenance of facilities on site, for duration of construction, except where otherwise stated	Months	15		
1.7	<u>Operation and maintenance of facilities on the Site for duration of construction</u>				
	Facilities for the Contractor				
1.7.3	(a) Boardroom	Months	15		
1.7.4	(b) Ablution and latrine facilities	Months	15		
1.7.5	(c) Tools and equipment	Months	15		

1.7.7	(d) Dealing with water	Months	15		
1.7.8	(e) Access	Months	15		
1.7.9	(f) Plant	Months	15		
1.8	Supervision for duration of construction	Months	15		
1.9	Company and head office overhead costs for the duration of the contract	Months	15		
1.10	Other time-related obligations				
1.10.1	Setting out of works:				
	Provision for surveyor for setting-out the works and record all as-built data, complete	Months	15		
1.10.2	Security of the site and material	Months	15		
1.11	Compliance with approved Safety Plan and Occupational Health and Safety Act and Construction Regulations. See also PSA10	Months	15		
1.12	Compliance with approved Environmental Plan and Act and Construction Regulations.				
1.12.1	Asbestos Impact Assessment Personnel (AIA)	Provisional Sum	1	R 500 000	R 500 000
	TOTAL CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 – NORTH PIER</u>				
	<u>BILL NO.2 : DEMOLITIONS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	<u>General</u>				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	<u>REMOVAL OF EXISTING WORK</u>				
2.1	<u>Remove existing Recycled Plastic handrails along North Pier.</u>				
	Handrails	m	550		
3	<u>BILL NO. 3 EARTHWORKS</u>				

	<u>PREAMBLES</u>				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
3.1	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
3.1.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Palisade	m3	3.24		
	600 X 600 X 1000 mm Holes - Pressure High Density Mesh Fence				
	Pressure High Density Mesh	m3	50.4		
3.1.2	<u>Trenches</u>				
	23.4 x 0.6 x 0.4 m North Pier Sliding Gate	m3	5.62		
3.2	<u>Extra over all excavations for carting away</u>				
3.2.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	59.26		
3.3	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
3.3.1	Backfilling to trenches, holes, etc.	m3	35.04		

4	<u>BILL NO. 4: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
4.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
4.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Palisade Bases	m3	1.3		
	400 X 400 X 900 mm Pressure High Density Mesh Bases	m3	20.16		
	Trenches	m3	2.76		
4.2	<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
4.2.1	<u>Rough formwork to sides</u>				
	<u>Concrete Beams</u>				
	North Pier Sliding Gate	m2	74.34		
5	<u>BILL NO. 5 EXTERNAL WORK</u>				
5.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				

	North Pier	m	550		
5.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	North Pier	No	184		
5.2	<u>Pressure High Density Mesh Fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.2.1	Supply High Security Galvanised PVC Panel High - Tech invisible fence as per specification about 2.5m wide x 2.5m high above ground level over flat terrain with 3mm x 4mm wire size.				
	High - Tech Invisible Fencing	m	350		
5.2.2	Supply Galvanised PVC H Post as per specification (76mm x 44mm) 3m high cast into concrete bases.				
	High - Tech invisible Fencing	No.	140		
5.2.3	Supply Galvanised PVC Spider fixator				
	High - Tech invisible Fencing	No.	140		
5.2.4	Supply Bolt and Shear Offnut				
	High - Tech invisible Fencing	No.	140		
	<u>High Density Steel Shark Tooth Spike</u>				

	Supply a 100mm high galvanised steel shark tooth spike shall be affixed to the top of panel edge, internally at 150mm intervals using-vandal bolts.	m	350		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 – PLEASURE ISLAND</u>				
2	<u>BILL NO. 2 EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>SITE CLEARANCE</u>				
2.1.1	<u>Site clearance</u>				
	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth				
	Pleasure Island	m2	48		

2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Pleasure Island	m3	28.8		
2.3	<u>Extra over all excavations for carting away</u>				
2.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	28.8		
3.3	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
3.3.1	Backfilling to trenches, holes, etc.	m3	17.28		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	11.52		
4	<u>BILL NO. 4 EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces,</u>				

	<u>including site clearance and preparation of ground</u>				
4.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Pleasure Island	m	240		
4.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	Pleasure Island	No.	80		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2- FINLAND SECURITY OFFICE</u>				
2	<u>BILL NO.2 : DEMOLITIONS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	<u>General</u>				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	<u>REMOVAL OF EXISTING WORK</u>				
2.1	Demolition of foundation approximately 500mm wide by 100mm thick deep in foundations including all necessary excavations and back filling etc. and cart away demolished materials from site.				
	Finland Security Office	m	94.2		

2.2	Demolish existing fencing with concrete uprights at 3m Centres and including two galvanised poles between concrete supports. Including concrete bases, excavations, backfilling and cart away of demolished work.				
	Finland Security Office	m	94.2		
3	<u>BILL NO. 3 EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
3.1	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
3.1.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Finland Security Office	m3	15.84		
3.2	<u>Extra over all excavations for carting away</u>				
3.2.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	9.5		
4	<u>BILL NO. 4: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
4.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				

4.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	6.34		
5	<u>BILL NO. 5 EXTERNAL WORK</u>				
5.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Finland Security Office	m	130		
5.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	Finland Security Office	No.	44		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2-MARINE BUILDING AND SUB-WAY</u>				
2	<u>BILL NO. 2 EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>REMOVAL OF EXISTING WORK</u>				
2.1.1	<u>Remove existing Recycled Plastic handrails along North Pier.</u>				
	Handrails	m	85		
2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Marine building to Sub-way	m3	43.2		
2.3	<u>Extra over all excavations for carting away</u>				

2.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	25.92		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	17.28		
4	<u>BILL NO. 4 EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
4.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Marine building to Sub-way	m	120		
4.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				

	Marine building to Sub-way	No.	40		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 – ISLAND VIEW 9</u>				
2	<u>BILL NO.2 : DEMOLITIONS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	<u>General</u>				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	<u>REMOVAL OF EXISTING WORK</u>				
2.1	Demolish existing fencing with concrete uprights at 3m Centres and including two galvanised poles				

	between concrete supports. Including concrete bases, excavations, backfilling and cart away of demolished work.				
	Island View 9	m	900		
3	<u>BILL NO. 3 EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
3.1	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
3.1.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Island View 9	m3	96		
3.2	<u>Extra over all excavations for carting away</u>				
3.2.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	38		
3.3	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
3.3.1	Backfilling to trenches, holes, etc.	m3	57.55		
4	<u>BILL NO. 4: CONCRETE, FORMWORK AND REINFORCEMENT</u>				

	<u>PREAMBLES</u>				
4.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
4.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	38		
5	<u>BILL NO. 5 EXTERNAL WORK</u>				
5.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Island View 9	m	800		
5.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	Island View 9	No.	267		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2- I&J and CANAL ROAD</u>				
2	<u>BILL NO. 2 EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>REMOVAL OF EXISTING WORK</u>				
2.1.1	Remove Existing Guard rails				
	I&J and Canal Road	m	130		
2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	I&J and Canal Road	m3	18		
2.4	<u>Extra over all excavations for carting away</u>				

2.4.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	7.2		
2.5	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
2.5.1	Backfilling to trenches, holes, etc.	m3	10.8		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	7.2		
3.2	<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
3.2.1	<u>Rough formwork to sides</u>				
4	<u>BILL NO. 4 EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
4.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5				

	mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	I&J and Canal Road	m	180		
4.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	I&J and Canal Road	No.	17		
	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including a 160 x 160 x 8mm base plate and 4 x 12mm diameter holding down bolts				
	I&J and Canal Road	No.	44		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 – MAYDON WHARF</u>				
2	<u>BILL NO.2 : DEMOLITIONS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	<u>General</u>				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	<u>REMOVAL OF EXISTING WORK</u>				
2.1	Removal of existing precast concrete fencing				
	Maydon Wharf 15	m	30		
	Maydon Wharf Security Centre	m	85		
3	<u>BILL NO. 3 EARTHWORKS</u>				

	<u>PREAMBLES</u>				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
3.1	<u>SITE CLEARANCE</u>				
3.1.1	<u>Site clearance</u>				
	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth				
	Maydon Wharf	m2	4.4		
3.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
3.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 900 X 600 mm Holes - Palisade Fence				
	Maydon Wharf Gate 1	m3	2.27		
	Maydon Wharf 15	m3	2.59		
	400 X 600 X 1000 mm Holes - Pressure High Density Mesh Fence				
	Maydon Wharf Security Centre	m3	3.07		
3.3	<u>Extra over all excavations for carting away</u>				
3.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	7.93		
4	<u>BILL NO. 4: CONCRETE, FORMWORK AND REINFORCEMENT</u>				

	<u>PREAMBLES</u>				
4.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
4.1.1	<u>15 MPa/19 mm concrete</u>				
	600 X 900 X 600 mm Bases	m3	4.86		
	400 X 400 X 600 mm Concrete Bases	m3	3.07		
5	<u>BILL NO. 5 EXTERNAL WORK</u>				
5.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 38x25x5 mm angled iron top, middle & bottom rail fixed to 40 x 40x 5 mm vertical steel pales at 125mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Maydon Wharf Gate 1	m	19		
	Maydon Wharf 15	m	22.1		
5.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 300x300x600mm concrete bases with posts set 600mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	Maydon Wharf Gate 1	No.	7		
	Maydon Wharf 15	No.	8		

5.2	<u>Pressure High Density Mesh Fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.2.1	Supply High Security Galvanised PVC Panel (Clear-View) fence as per specification about 2.5m wide x 2.4m high above ground level over flat terrain with 3mm x 4mm wire size.				
	Maydon Wharf Security Centre	m	80		
5.2.2	Supply Galvanised PVC H Post as per specification (76mm x 44mm) 3m high cast into concrete bases.				
	Maydon Wharf Security Centre	No.	32		
5.2.3	Supply Galvanised PVC Spider fixator				
	Maydon Wharf Security Centre	No.	32		
5.2.4	Supply Bolt and Shear Offnut				
	Maydon Wharf Security Centre	No.	32		
TOTAL WORKS CARRIED FORWARD TO SUMMARY					

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 - BAYHEAD</u>				
2	<u>BILL NO. 2: EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>SITE CLEARANCE</u>				
2.1.1	<u>Site clearance</u>				
	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth				
	Bayhead Road	m2	22.5		
2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	Bayhead Road	m3	3.6		

2.3	<u>Extra over all excavations for carting away</u>				
2.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	1.44		
2.4	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
2.4.1	Backfilling to trenches, holes, etc.	m3	2.16		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	2.92		
4	<u>BILL NO. 4: EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
4.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm				

	posts on both ends (75x75 posts elsewhere measured).				
	Bayhead Road	m	25		
4.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	Bayhead Road	No.	10		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2 – SOUTH PIER</u>				
2	<u>BILL NO.2 : DEMOLITIONS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	<u>General</u>				
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
	<u>REMOVAL OF EXISTING WORK</u>				
2.1	Removal of Existing fence				
	South Pier Security house	m	70		
3	<u>BILL NO. 3: EARTHWORKS</u>				
	<u>PREAMBLES</u>				

	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
3.1	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
3.1.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Palisade Fence				
	South Pier Security house	m3	8.64		
3.2	<u>Extra over all excavations for carting away</u>				
3.2.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	3.45		
3.3	<u>FILLING ETC</u>				
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
3.3.1	Backfilling to trenches, holes, etc.	m3	5.18		
4	<u>BILL NO. 4: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
4.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
4.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	8.64		
5	<u>BILL NO. 5: EXTERNAL WORK</u>				

5.1	<u>FENCING</u>				
	<u>Reinforced Steel palisade fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
5.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	South Pier Security house	m	70		
5.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured).				
	South Pier Security house	No.	24		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 2- BAT CENTRE TO MARINE SCHOEMAN'S BRIDGE</u>				
2	<u>BILL NO. 2: EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>SITE CLEARANCE</u>				
	Site clearance				
2.1.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth				
	Bat Centre to Schoemans bridge	m2	170.8		
2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Pressure High Density Mesh Fence				

	Bat Centre to Schoemans bridge	m3	53		
2.3	<u>Extra over all excavations for carting away</u>				
2.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	21.6		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	21.6		
4	<u>BILL NO. 4: EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Pressure High Density Mesh Fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
4.1.1	Supply and Install Industrial Steel Palisade Fence approximately 3m wide by 2.5m high formed of 50mm x 50mm x 5mm angle iron top, bottom stringers fixed to 40 x 40x 5 mm vertical steel pales at 150mm centres with panels fixed to 75x75x5 mm posts on both ends (75x75 posts elsewhere measured).				
	Bat Centre to Marine Building	m	450		
4.1.2	Supply And Install Galvanised steel posts formed of 75x75x2mm approximately 2.5 mm high above ground including 400x400x900mm				

	concrete bases with posts set 900mm deep in concrete foundation including excavation, concrete, backfilling etc. (elsewhere measured)				
	Bat Centre to Marine Building	No.	157		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 3- ROADS & TRACK</u>				
2	<u>BILL NO. 2: EARTHWORKS</u>				
	<u>PREAMBLES</u>				
	<u>View site</u>				
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
	The Tenderer is advised to refer to the latest edition of the 'Modell Preambles for Trade 2008' before pricing the Bill.				
2.1	<u>REMOVAL OF EXISTING WORK</u>				
	Removal of existing precast concrete fence				
	Roads and Tracks	m	250		
2.2	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				

2.2.1	<u>Excavation in earth not exceeding 2m deep</u>				
	600 X 600 X 1000 mm Holes - Pressure High Density Mesh Fence				
	Roads and Tracks	m3	36		
2.3	<u>Extra over all excavations for carting away</u>				
2.3.1	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	14.4		
3	<u>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>PREAMBLES</u>				
3.1	<u>CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
3.1.1	<u>20Mpa concrete</u>				
	400 X 400 X 900 mm Bases	m3	14.4		
	<u>BILL NO. 4: EXTERNAL WORK</u>				
4.1	<u>FENCING</u>				
	<u>Pressure High Density Mesh Fence finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
4.1.1	Supply High Security Galvanised PVC Panel (Clear-view) fence as per specification about 2.5m wide x 2.4m high above ground level over flat terrain with 3mm x 4mm wire size.				
	Roads and Tracks	m	250		

4.1.2	Supply Galvanised PVC H Post as per specification (76mm x 44mm) 3m high cast into concrete bases.				
	Roads and Tracks	No.	100		
4.1.3	Supply Galvanised PVC Spider fixator				
	Roads and Tracks	No.	100		
4.1.4	Supply Bolt and Shear Offnut				
	Roads and Tracks	No.	100		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 4- GATES</u>				
	<u>BILL NO. 2 EXTERNAL WORK</u>				
2.1	<u>GATES</u>				
	<u>Reinforced Steel Palisade Gate</u>				
	<u>Reinforced Steel palisade gate finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
2.1.1	Supply and Install Galvanized Single Swinging Gate with overall size 1m by 2.5m high formed of 75x75x5 tubing frame, including 40x40x5 angled pales at 150mm centres. Including all necessary locking mechanisms etc.				
	Pleasure Island	No.	1		
	South Pier Security house	No.	1		
2.1.2	Supply and Install Galvanized Sliding Gates with overall size 10m by 2.5m high formed of 75x75x2 tubing frame, including 40x40x5 angled pales at 150mm centres				
	North Pier	No.	1		
	Supply and Install Galvanized double swing Gates with overall size 6m by 2.5m high formed of 75x75x5 tubing frame, including 40x40x5 angled pales at 125mm centres and 225 x 225 x 8mm thick square hollow gate post.				
2.1.4					
	South Pier security house	No.	1		
	Island View 9	No.	3		
	Supply and Install Galvanized double swing Gates with overall size 16m by 2.5m high formed of 75x75x2 tubing frame, including				

	40x40x5 angled pales at 125mm centres and 225 x 225 x 8mm thick square hollow gate post.				
	Maydon wharf 15	No.	1		
	Supply and Install Galvanized swing Gates with overall size 16m by 2.5m high formed of 75x75x2 tubing frame, including 40x40x5 angled pales at 125mm centres and 225 x 225 x 8mm thick square hollow gate post.				
2.1.5					
	Bayhead Road Gate	No.	2		
	<u>Pressure High Density Mesh Gate</u>				
2.2					
	<u>Pressure High Density Mesh Gate finished smooth on exposed surfaces, including site clearance and preparation of ground</u>				
	Supply and Install Pressure High Density Mesh double swing gate with overall size 5m by 2.5m high				
2.2.2					
	Maydon Wharf Security centre	No.	2		
	<u>Galvanised Steel Spike Teeth</u>				
2.3					
	Supply a 100mm Pressure High Density steel spike teeth shall be affixed to the top of panel edge, internally at 150mm intervals using-vandal bolts.				
2.3.1					
	Maydon Wharf Security Centre	m	66		
	North Pier	m	424		
	Bat Centre to Marine Building	m	390.8		
	Roads and Tracks	m	240		
	TOTAL WORKS CARRIED FORWARD TO SUMMARY				R
OVERALL TOTAL SUMMARY COSTS		R			