

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 1</u>				
<u>BILL NO. 1</u>				
<u>PRELIMINARIES</u>				
<u>BUILDING AGREEMENT AND PRELIMINARIES</u>				
The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described				
The JBCC Principal Building Agreement contract data form an integral part of this agreement				
The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities , amended as hereinafter described				
The contractor is deemed to have referred to the above-mentioned documents for the full intent and meaning of each clause				
The clauses in the above-mentioned documents are hereinafter referred to by clause number and heading only				
Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"				
Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the above-mentioned documents				
Carried Forward				R
Section No. 1 Bill No. 1 Preliminaries				

<p style="text-align: right;">Brought Forward</p> <p><u>PREAMBLES FOR TRADES</u></p> <p><i>The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated descriptions utilised in these bills of quantities by inter alia referring to SANS construction standards. <u>Where such preambles are not applicable</u> (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the Standard System of Measuring Building Work (seventh edition) for works within South Africa or the Standard Method of Measuring Building Work for Africa 2015 (first edition) for works elsewhere in Africa, represent the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications</i></p> <p><i>Note that the text of the Standard System of Measuring Building Work (seventh edition) and that of the Standard Method of Measuring Building Work for Africa 2015 (first edition) is the same</i></p> <p><i>The latest version of the General Preambles for Trades should be referred to should the General Preambles for Trades 2017 be revised in future</i></p> <p>The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles</p> <p>The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>			R	
			R	

	Brought Forward				R
	<u>STRUCTURE OF THIS PRELIMINARIES BILL</u>				
	Section A : A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement				
	Section B : A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries				
	Section C : Any special clauses to meet the particular circumstances of the project				
	<u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u>				
	<u>Interpretation (A1-A7)</u>				
1	Clause 1.0 - Definitions and interpretation				
	Definition of agreement				
	The definition of agreement is replaced with the following definition :				
	" AGREEMENT : The JBCC Principal Building Agreement, the completed JBCC PBA contract data, the contract drawings , the priced documents and any other documents reduced to writing and signed by the parties "				
	Pricing of bills of quantities				
	The contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement . Value Added Tax (VAT) is to be separately stated on the summary page of these bills of quantities				
	Carried Forward				R
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	<p>Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the contractor's omission to price any item will be entertained</p> <p>Prices for all construction equipment, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary</p> <p>Abbreviated descriptions</p> <p>The items in these bills of quantities utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the contractor shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of international best practice</p> <p>Legal status of contractor</p> <p>If the contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:</p> <ol style="list-style-type: none"> 1. These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement 2. These persons shall notify the employer of their leader who has assigned authority to bind the contractor and each of these persons 3. The contractor shall not alter its composition or legal status without the prior written consent of the employer <p>F:..... V:..... T:.....</p>			
2	Clause 2.0 - Law , regulations and notices		Item	
	Carried Forward			R
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<p><i>Insert the following for <u>residential developments</u> only</i></p> <p><i>The cost to the employer of the NHBRC levies mentioned below is to be conveyed to the employer in order to present an overall building cost</i></p> <p>? NHBRC levies</p> <p>The employer shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The contractor warrants that he is registered and will maintain registration with the NHBRC for the duration of this agreement [2.1] ?</p> <p>F:..... V:..... T:.....</p> <p>The contractor shall:</p> <ol style="list-style-type: none"> 1. Comply with the health and safety specification for the works 2. Prepare and agree with the health and safety consultant the health and safety plan for the works 3. Co-operate with the health and safety consultant in all respects 4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification 5. Conform to the conditions contained in the employer's health and safety specification 				
3	<p>Clause 3.0 - Offer and acceptance</p> <p>F:..... V:..... T:.....</p>	Item		
4	<p>Clause 4.0 - Cession and assignment</p> <p>F:..... V:..... T:.....</p>	Item		
5	<p>Clause 5.0 - Contract Documents</p> <p>Value Added Tax</p>	Item		
Carried Forward				R
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	Brought Forward			R
	<p>Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)</p> <p>Priced document as specification</p> <p>Clause 5.4 is deemed to be deleted</p> <p>The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any ?</p> <p>Electronic issue of drawings</p> <p>All drawings for this project will be issued electronically and the contractor shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6] ?</p> <p>Precedence</p> <p>Clause 5.6 is deemed to be deleted. The provisions of this Bill No. 1 (Preliminaries) shall take precedence over any other documents which constitute this agreement [5.6]</p> <p>F:..... V:..... T:.....</p>			
6	<p>Clause 6.0 - Employer's agents</p> <p>Delegated authority</p> <p>The authority of the principal agent to issue contract instructions [17.1] and perform duties for specific aspects of the works</p> <p><i>Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA</i></p> <p>1.1 Duties [6.2] :</p> <p>The architect is responsible for the architectural design, functional design and quality inspection of the works</p> <p>1.2 Contract instructions [6.2; 17.1] :</p>	Item		
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Brought Forward				R	
1.2.1	Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement				
1.2.2	Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works				
1.2.3	The site [13.0]				
1.2.4	Compliance with the law , regulations and bylaws [2.1]				
1.2.5	Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works				
1.2.6	Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]				
1.2.7	Removal or re-execution of work				
1.2.8	Removal or substitution of any materials and goods				
1.2.9	Protection of the works				
1.2.10	Making good physical loss and repairing damage to the works [23.2.2]				
1.2.11	Rectification of defects [21.2]				
1.2.12	A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion				
1.2.13	Expenditure of budgetary allowances, prime cost amounts and provisional sums				
1.2.14	Appointment of a subcontractor [14.0; 15.0]				
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	Brought Forward			R	
	1.2.15 Work by direct contractors [16.0]				
	1.2.16 On suspension or termination, protection of the works , removal of construction equipment and surplus materials and goods [29.0]				
7	Clause 7.0 - Design responsibility F:..... V:..... T:.....	Item			
	<u>Insurances and securities (A8-A11)</u>				
8	Clause 8.0 - Works risk F:..... V:..... T:.....	Item			
9	Clause 9.0 - Indemnities F:..... V:..... T:.....	Item			
10	Clause 10.0 - Insurances F:..... V:..... T:.....	Item			
11	Clause 11.0 - Securities <i>Where it is expected of the contractor to waive his lien in terms of clause 11.10, the waiver of lien may be extended to subcontracts as follows:</i> Extension of waiver of lien The contractor shall ensure that a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times [11.10] ? F:..... V:..... T:.....	Item			
	<u>Execution (A12 - A17)</u>				
12	Clause 12.0 - Obligations of the parties				
	Carried Forward			R	
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<p style="text-align: right;">Brought Forward</p> <p>Provisions of clauses 12.1.2 to 12.1.6 and 12.2.18</p> <p>Refer to the contract data, the Preliminaries document and "Section B : Preliminaries" of this Bill No. 1 with reference to the provisions of clauses 12.1.2 to 12.1.6 and 12.2.18 of the JBCC Principal Building Agreement</p> <p>Office accommodation</p> <p>The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]</p> <p>Notice board</p> <p>The contractor shall erect in a position approved by the principal agent, maintain and remove on practical completion a notice board recommended by the South African Institute of Architects and as approved by the principal agent listing the names and logos of the employer, the contractor and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected [12.2.18]</p> <p>Access to water, sewer, stormwater and electricity connections</p> <p>The employer is not in a position to identify access to water, sewer, stormwater and/or electricity connections to the site as may be suitable for the execution of the works. The contractor is to allow what he considers to be required and is to qualify his tender in detail in this regard, failing which it shall be taken that the contractor has allowed what will be required for the execution of the works. In such case no claims for additional cost or loss shall be entertained [12.1.5]</p> <p>Statutory and other notices</p> <p>The contractor shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the works by the contractor. The contractor shall pay all deposits or fees in this regard</p>			R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>			R	

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	<p>It is, however, specifically recorded that the employer shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto</p> <p>F:..... V:..... T:.....</p>	Item			
13	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item			
14	<p>Clause 14.0 - Nominated subcontractors</p> <p>F:..... V:..... T:.....</p>	Item			
15	<p>Clause 15.0 - Selected subcontractors</p> <p>F:..... V:..... T:.....</p>	Item			
16	<p>Clause 16.0 - Direct contractors</p> <p>Attendance on direct contractors</p> <p>In respect of direct contractors the contractor shall:</p> <ol style="list-style-type: none"> 1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials 2. Allow the use of personnel welfare facilities, where provided 3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation 4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1] 				
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	F:..... V:..... T:.....	Item			
17	<p>Clause 17.0 - Contract instructions</p> <p>? Site instructions</p> <p>Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor ?</p> <p>F:..... V:..... T:.....</p> <p><u>Completion (A18 - A24)</u></p>				
18	Clause 18.0 - Interim completion	N/A			
19	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	Item			
20	<p>Clause 20.0 - Completion in sections</p> <p>F:..... V:..... T:.....</p>	Item			
21	<p>Clause 21.0 - Defects liability period and final completion</p> <p>F:..... V:..... T:.....</p>	Item			
22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item			
23	<p>Clause 23.0 - Revision of the date for practical completion</p> <p>Substitution of materials and goods</p> <p>The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2]</p>				
	Carried Forward			R	
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>				

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	F:..... V:..... T:.....	Item		
24	Clause 24.0 - Penalty for late or non-completion			
	F:..... V:..... T:.....	Item		
	<u>Payment (A25 - A27)</u>			
25	Clause 25.0 - Payment			
	Prices submitted			
	Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate , there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion , it shall be in writing			
	F:..... V:..... T:.....	Item		
26	Clause 26.0 - Adjustment of the contract value and final account			
	Tenant installation/user requirements delayed			
	There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to practical completion			
	Should the contractor be instructed to do so he shall execute this work under the conditions pertaining to this agreement on the basis that a separate amount for preliminaries appurtenant to this work (if applicable) is agreed to between the contractor and the principal agent and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of practical completion of the works			
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	<p>The employer reserves the right to omit such work without compensation to the contractor for loss of profit or any other loss which the contractor may suffer as a result of such omission ?</p> <p>Cost of claims</p> <p>All costs incurred by the contractor in the preparation of claims shall be borne by the contractor. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this agreement [30.6 & 7] from making a determination on costs</p> <p>The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6]</p> <p>F:..... V:..... T:.....</p>				
27	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p>	Item			
	<u>Suspension and termination (A28 - A29)</u>				
28	<p>Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p>	Item			
29	<p>Clause 29.0 - Termination</p> <p>F:..... V:..... T:.....</p>	Item			
	<u>Dispute resolution (A30)</u>				
30	<p>Clause 30.0 - Dispute resolution</p> <p>F:..... V:..... T:.....</p>	Item			
31	<u>Agreement</u>				
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	Brought Forward			R	
	<p>The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties</p> <p>F:..... V:..... T:.....</p>	Item			
32	<u>Contract data</u>				
	Payment of preliminaries				
	<p>Where Option B is applicable and the initial construction period is extended the monthly charge shall be recalculated on the same basis as was initially applied but taking into account the revised construction period and the amounts already paid to the contractor [CD26.0]</p>				
	Adjustment of preliminaries				
	<p>Where the adjustment of preliminaries is in terms of Option A, the construction period and the initial construction period shall be calculated in working days [CD 26.0]</p> <p>Where the adjustment of preliminaries is in terms of Option A, the breakdown of charges into three categories and, where applicable, the appointment of preliminaries amounts per section, shall be provided by the contractor in schedule form indicating which items in this PreliminariesBill are priced and whether the are fixed, Value - related or Time - related or a combination of categories. Alternatively, the contractor may provide the breakdown described above by marking each amount in this Preliminaries Bill with a "F", "V", "T" to indicate Fixed, Value - Related or Time - related respectively. Should the contractor fail to provide the sectional apportionment within the period stipulated, the categorised amounts shall be prorated to the value of each section [CD 26.0]</p>				
	Carried Forward			R	
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	Brought Forward			R	
	<p>Where the adjustment of preliminaries is required in terms of Option B, the detailed breakdown of preliminaries amounts and, where applicable, the apportionment of preliminaries amounts per section, shall be provided by the contractor in an schedule form which separates, as a minimum, the administrative and supervisory staff, the use of construction equipment in terms of the programme, establishment and disestablishment charges, Insurances and Guarantees, site office costs and the like. Should the contractor fail to provide such information within the period stipulated, Option A shall apply [CD 26.0]</p>				
33	<p><u>Changes made to JBCC documentation</u></p> <p>It is specifically agreed that the note below calling for amendments to the standard JBCC Agreement to be listed in the space provided in the contract data or recorded in "the single referenced Annexure" shall not apply. Where standard clauses or alternatives are not entirely applicable to this agreement, modifications, corrections or supplements as will apply are given under each relevant clauses heading in this Preliminaries Bill and such amendments, modifications, corrections or supplements shall take precedence notwithstanding the note below and notwithstanding the provisions of clause 5.6 of the JBCC Principal Building Agreement.</p> <p>F:..... V:..... T:.....</p> <p><u>SECTION B: GENERAL PRELIMINARIES</u></p> <p><u>User note</u></p> <p><i>Amendments, modifications, corrections or supplements to the General Preliminaries in Section B should be recorded in the contract data</i></p> <p><i>Should it be necessary to expand on any of the General Preliminaries clauses, the user should list the appropriate General Preliminary clause number and heading and insert the relevant provision under a suitable heading in bold as may be necessary</i></p>				
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	<u>Definitions and interpretation (B1)</u>				
34	Clause 1.1 - Definitions F:..... V:..... T:.....	Item			
35	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item			
	<u>Documents (B2)</u>				
36	Clause 2.1 - Checking of documents F:..... V:..... T:.....	Item			
37	Clause 2.2 - Provisional bills of quantities				
38	Clause 2.3 - Availability of construction information				
39	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:.....	Item			
	<u>Previous work and adjoining properties (B3)</u>				
40	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item			
41	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item			
42	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item			
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	<u>The site (B4)</u>				
43	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item			
44	Clause 4.2 - Enclosure of the works	Item			
45	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item			
46	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item			
47	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item			
48	Clause 4.6 - Services - known F:..... V:..... T:.....	Item			
49	Clause 4.7 - Protection of trees and/or relevant natural features F:..... V:..... T:.....	Item			
	<u>Management of contract (B5)</u>				
50	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item			
51	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item			
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52	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item			
	<u>Samples, shop drawings and manufacturer's instructions (B6)</u>				
53	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item			
54	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item			
55	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item			
56	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item			
	<u>Deposits and fees (B7)</u>				
57	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item			
	<u>Temporary services (B8)</u>				
58	Clause 8.1 - Water F:..... V:..... T:.....	Item			
59	Clause 8.2 - Electricity F:..... V:..... T:.....	Item			
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60	<p>Clause 8.3 - Ablution and welfare facilities</p> <p>F:..... V:..... T:.....</p>	Item			
61	<p>Clause 8.4 - Communication facilities</p> <p>F:..... V:..... T:.....</p> <p><u>Prime cost amounts (B9)</u></p>	Item			
62	<p>Clause 9.1 - Responsibility for prime cost amounts</p> <p><i>Where details of materials for which prime cost amounts are to be allowed <u>are</u> readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc</i></p> <p>F:..... V:..... T:.....</p> <p><u>Attendance on subcontractors (B10)</u></p>	Item			
63	<p>Clause 10.1 - General attendance</p> <p><u>User note</u></p> <p><i>General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement</i></p> <p>F:..... V:..... T:.....</p>	Item			
64	<p>Clause 10.2 - Special attendance</p> <p><u>General (B11)</u></p>				
65	<p>Clause 11.1 - Protection of the works</p> <p>F:..... V:..... T:.....</p>	Item			
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66	Clause 11.2 - Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item			
67	Clause 11.3 - Security of the works F:..... V:..... T:.....	Item			
68	Clause 11.4 - Notice before covering work F:..... V:..... T:.....	Item			
69	Clause 11.5 - Disturbance F:..... V:..... T:.....	Item			
70	Clause 11.6 - Environmental disturbance F:..... V:..... T:.....	Item			
71	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....	Item			
72	Clause 11.8 - Vermin F:..... V:..... T:.....	Item			
73	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item			
74	Clause 11.10 - Tenant installations F:..... V:..... T:.....	Item			
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
75	<p>Clause 11.11 - Advertising</p> <p>F:..... V:..... T:.....</p> <p><u>Preliminaries schedule (B12)</u></p>		Item		
76	<p>Information for completion of the preliminaries schedule</p> <p>Information necessary for elections and completion of those clauses contained in the preliminaries schedule which are necessary for tender purposes is given hereunder. Where no information is given it shall mean that no specific requirements are expected or that the clause is not relevant to this specific contract</p> <p>12.1 - Provisional bills of quantities [2.2]</p> <p style="padding-left: 40px;">The quantities are provisional Yes</p> <p>12.2 - Availability of construction information [2.3]</p> <p style="padding-left: 40px;">Construction documentation is complete Yes</p> <p>12.3 - Previous work - dimensional accuracy [3.1]</p> <p>The contractor is required to check the site for dimensional accuracy of the previous works, report thereon in detail possession of the site. Failure by the contractor to comply with the above shall deem the previous works to be correct, and this shall be the basis for adjustment to contract value.</p> <p>12.4 - Previous work - defects [3.2]</p> <p>not applicable</p>				
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward		R
<p>12.5 - Inspection of adjoining properties [3.3]</p> <p>Specific Requirements:</p> <p>The contractor shall make a photographic record of all adjoining/ existing properties, buildings, walls, boundary fences, roads, pavements, kerbs, etc that could be affected by the works and deliver same recorded on a CD to the principal agent.</p>		
12.6 - Defined works area [4.1]		
12.7 - Handover of site in stages [4.2]		
12.8 - Enclosure of the works [4.3]		
12.9 - Geotechnical investigation [4.4]		
12.10 - Existing premises occupied [4.6]		
12.11 - Services - known [4.7]		
12.12 - Protection of trees and/or relevant natural features [4.8]		
12.13 - Water [8.1]		
Option A (by contractor)		No
Option B (by employer - free of charge)		No
Option C (by employer - metered)		Yes
12.14 - Electricity [8.2]		
Option A (by contractor)		No
Option B (by employer - free of charge)		No
Option C (by employer - metered)		Yes
12.15 - Ablution and welfare facilities [8.3]		
Option A (by contractor)		Yes
Option B (by employer)		No
Carried Forward		R
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>		

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward		R
12.16 - Communication facilities [8.4]		
Specific Requirements: Contractor`s account		
12.17 - Protection of the works [11.1]		
Specific Requirements: The Contractor shall be liable for all damages to adjoining properties and existing roads and pavement and must make good all damages to same at his own expense all to the satisfaction of the Principal Agent.		
12.18 - Protection/isolation of existing/sectionally occupied works [11.2]		
Protection/isolation is required	Yes	
12.19 - Disturbance [11.5]		
Specific Requirements: Minimising disturbanceAll work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority.		
Whilst the employer shall not impose restrictions upon the contractor's working hours, the contractor shall take all measures available to him in order to minimise noisy operations during business hours. Such measures will include, inter alia, the use of silent compressors and strict control of workmen.		
Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever.		
12.20 - Environmental disturbance [11.6]		
Carried Forward		R
Section No. 1		
Bill No. 1		
Preliminaries		

Brought Forward		R	
<p>Controlling all forms of pollution</p> <p>The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the site during the construction period due <i>inter alia</i> to noise, artificial light, wind-blown sand, dust, deposits of mud, etc</p> <p>The contractor is to ensure that all roads which border the site and is used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works</p> <p>F:..... V:..... T:.....</p>	Item		
<p><u>SUPPLEMENTARY DOCUMENTATION</u></p> <p>AS BUILT DRAWINGS</p> <p>The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineers drawings and are to be submitted to the principal agent and the structural engineer for their records.</p> <p>F:..... V:..... T:.....</p>		Item	
Carried Forward		R	
Section No. 1 Bill No. 1 Preliminaries			

	Brought Forward			R	
	<u>WARRANTIES FOR MATERIALS AND WORKMANSHIP</u>				
78	<p>Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or doing the work and shall deliver same to the principal agent on the final completion of the contract</p> <p>The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of practical completion and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written notice to do so</p> <p>The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor. The principal agent shall be the sole judge of the cause responsible for defects in the work and his ruling shall be final and binding.</p> <p>F:..... V:..... T:.....</p>				
	<u>SECTION C: SPECIFIC PRELIMINARIES</u>				
	<p>ENCLOSURE OF WORKS.</p> <p>The contractor shall erect whatever other site enclosure, hoardings, access gates, etc he deems necessary to maintain the security of the works, his temporary offices, stores, etc and to protect the general public from accessing dangerous construction areas, and he shall maintain such enclosure during the course of the works and remove same prior to practical completion.</p> <p>F:..... V:..... T:.....</p>	Item			
		Item			
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward		R
79	<p>DEFINED WORKS AREA</p> <p>The area of the works to be occupied by the contractor, any restriction to the area and the limit of access or exit will be pointed out to the contractor by the principal agent on handing over of the site.</p> <p>F:..... V:..... T:.....</p>	Item	
80	<p>LABOUR RECORD</p> <p>At the end of each week the contractor shall provide the Principal Agent with written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all sub-contractors on the works each day</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
81	EMPLOYMENT OF ILLEGAL WORKERS No illegal (migrant) workers may be employed or allowed on the site by any contractor or subcontractor. Precautions to prevent illegal workers being employed shall include but not be limited to the following: 1. Records of all workers shall be maintained by all contractors and subcontractors, and shall be submitted to the contractor's site agent on a daily basis. 2. Advise all persons entering the site by means of notices or posters that illegal workers will not be employed on the site, and that any illegal workers found on site will be reported to the authorities. 3. Advise all persons entering the site by means of notices or posters that anyone who fails to provide full and proper means of identification when requested to do so by a supervisor will not be allowed to remain on the site. F:..... V:..... T:.....				
		Item			
82	OVERTIME Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the employer F:..... V:..... T:.....				
		Item			
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
83	<p>CO-OPERATION OF THE CONTRACTOR FOR COST MANAGEMENT</p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the contract value does not exceed the budget</p> <p>F:..... V:..... T:.....</p>				
		Item			
84	<p>PRICES FOR VARIATIONS</p> <p>Where prices or quotations for variations are submitted by the contractor during the currency of the contract, it shall be clearly understood that these are for the purpose of consideration only and that there is not to be any assumption of their acceptance.</p> <p>F:..... V:..... T:.....</p>				
		Item			
85	<p>SCAFFOLDING</p> <p>Tenderer to allow for scaffolding in accordance with the scope, including the provision of scaffolding for sub contractors as necessary to complete the works</p> <p>F:..... V:..... T:.....</p>				
		Item			
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
86	<p>CHANGES TO THE SCOPE OF WORKS</p> <p>The client reserves the right to extend the scope of works by not more than 20 percent (%) of the tendered quantities without repricing.</p> <p>F:..... V:..... T:.....</p>		Item	
87	<p>SITE INSTRUCTIONS</p> <p>Contract instructions issued on site are to be recorded in triplicate in an instruction book which is to be maintained on site by the contractor. Copies to be sent to Principal Agent and Quantity Surveyor weekly.</p> <p>No verbal Contract Instructions will be considered for remuneration.</p> <p>F: V: T:</p>		Item	
Carried Forward				R
<p>Section No. 1 Bill No. 1 Preliminaries</p>				

	Brought Forward			R	
88	WARRANTIES FOR MATERIAL AND WORKMANSHIP Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the final completion of the contract. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor F: V: T:				
		Item			
89	COOPERATION OF THE CONTRACTOR FOR COST MANAGEMENT It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The principal agent undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors F: V: T:				
		Item			
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
90	TESTING OF WINDOWS FOR WATERTIGHTNESS Each window shall be tested for watertightness with water sprayed on using adequate pressure. If in the opinion of the principal agent the pressure proves to be inadequate, then the pressure shall be boosted by means of compressed air or other equally approved means F:..... V:..... T:.....		Item		
91	CONFIDENTIALITY The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works. No information regarding this project shall be published or disclosed without the prior written consent of the employer F:..... V:..... T:.....		Item		
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
92	<p>GROUND AND ACCESS TO WORKS</p> <p>On completion of operations, the contractor shall restore the ground surface, wherever it may have been disturbed, to its original condition by filling ruts with material similar to the material within the rut and levelling the ground and, where necessary, plant grass and shrubs as may be required. Reinstatement operations to be done at the Contractor's expense.</p> <p>F:..... V:..... T:.....</p>				
		Item			
93	<p>ESCALATION/ CONTRACT PRICE ADJUSTMENTS PROVISION</p> <p>This contract and the rates contained will be Fixed and not subject to Escalation / Contract Price Adjustment</p> <p>F:..... V:..... T:.....</p>				
		Item			
94	<p>CONTRACT DRAWINGS</p> <p>Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agent</p> <p>F:..... V:..... T:.....</p>				
		Item			
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
95	<p>TRADE NAMES</p> <p>Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders</p> <p>If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for</p> <p>F:..... V:..... T:.....</p>				
		Item			
96	<p>IMPORTED MATERIALS AND EQUIPMENT</p> <p>Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment to be completed by tenderer)</p> <p>Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)</p> <p>F:..... V:..... T:.....</p>				
		Item			
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
97	<p>ACCESS TO SITE LOCATIONS</p> <p>The site is located at Lentegeuur Train Station and the tenderer must allow in his pricing for access and other considerations specific to these environments</p> <p>F:..... V:..... T:.....</p>	Item	
98	<p>SECURITY / BACKGROUND CHECKS OF PERSONNEL</p> <p>The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, undertake criminal background checks</p> <p>In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works</p> <p>F:..... V:..... T:.....</p>	Item	
Carried Forward			R
<p>Section No. 1 Bill No. 1 Preliminaries</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
99	<p>SITE AND CONTACT RESTRICTIONS</p> <p>The contractor is required to keep his personnel and operations limited to the site boundary defined by the principal agent</p> <p>Under no circumstances is the contractor's workmen permitted to have any contact with any other person on the property except for the contact person/s identified by the principal agent for the purpose of liaising with the contractor's representative</p> <p>F:..... V:..... T:.....</p>		Item		
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
100	<p>HIV/AIDS AWARENESS</p> <p>It is required of the contractor to thoroughly study the HIV/AIDS Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements</p> <p>of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained</p> <p>The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of Clause A 31 of "Section 1: Preliminaries (Section A)" or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment</p>				
		Item			
101	<p>AWARENESS CHAMPION</p> <p>Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification</p> <p>F:..... V:..... T:.....</p>				
		Item			
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
102	<p>AWARENESS WORKSHOPS</p> <p>Selection and appointment of a competent Service Provider by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification</p> <p>F:..... V:..... T:.....</p>				
		Item			
103	<p>POSTERS, BOOKLETS, VIDEOS, ETC</p> <p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>F:..... V:..... T:.....</p>				
		Item			
104	<p>ACCESS TO CONDOMS</p> <p>Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>F:..... V:..... T:.....</p>				
		Item			
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward	R
105	MONITORING Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification F:..... V:..... T:.....	Item
106	UTILISE LOCAL RESOURCES Utilise local resources F:..... V:..... T:.....	Item
107	PROVIDE EXPERIENTIAL WORK OPPORTUNITIES TOWARDS A TECHNICAL QUALIFICATION FOR DESIGNATED PERSONS Provide experiential work opportunities towards a technical qualification for designated persons F:..... V:..... T:.....	Item
	Carried Forward	R
Section No. 1 Bill No. 1 Preliminaries		

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
108	<p>PROVIDE EXPERIENTIAL WORK OPPORTUNITIES AND TRAINING TOWARDS TRADE COMPETENCIES FOR DESIGNATED PERSONS</p> <p>Provide experiential work opportunities and training towards trade competencies for designated persons</p> <p>F:..... V:..... T:.....</p>				
		Item			
109	<p>COMMUNITY ENGAGEMENT OBLIGATION</p> <p>The contractor shall ensure labour and community harmony on the project site and in the surrounding community. The Contractor shall participate in all community engagement activities where appropriate to promote the successful early completion of the project.</p> <p>The CLO and the Contractors most senior site manager are required to participate in the regular scheduled PSC meetings. The terms of reference for the PSC will be established prior to electing community / stakeholder participants.</p> <p>F:..... V:..... T:.....</p>				
		Item			
110	<p>OCCUPATIONAL HEALTH AND SAFETY</p> <p>The contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and safety Act, 1993 (Act No 85 of 1993)</p> <p>It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / lump sum document</p> <p>The contractor must take note that compliance with the</p>				
	Carried Forward			R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
	Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance.				
	The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment				
	Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained				
	Provide the amount for the cost of employing a full time Health & Safety Officer for the duration of the project				
	F:..... V:..... T:.....				
		Item			
111	Profit	Item			
112	Attendance	Item			
113	SAFETY EQUIPMENT				
	Personal protective equipment, clothing, fencing, signage, and other safety equipment.				
	F:..... V:..... T:.....	Item			
114	Profit	Item			
	Carried Forward			R	
	Section No. 1 Bill No. 1 Preliminaries				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
115	Attendance	Item		
116	COMMUNITY LIAISON OFFICER (CLO)			
	<p>The contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of this contract.</p> <p>A CLO will be identified by the local structures of the ward areas and appointed following fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project. The contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.</p> <p>Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:</p> <ol style="list-style-type: none"> 1. Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by the contractor. 2. Assisting in sourcing labour only domestic sub-contractors and the procurement of materials from local resources, as required by the contractor. 3. Assisting the contractor by identifying areas of potential conflict and of threats to the project or to stakeholders in the project and recommend appropriate action to the contractor. 4. Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise. 5. Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained. 6. Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained. 7. Identifying and reporting to the contractor regarding issues where communication between stakeholder is necessary, recommend courses of action and facilitate 			
	Carried Forward			R
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
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	Brought Forward			R	
	such communications				
	8. Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the contractor regarding the grievances and solution thereto.				
	9. Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.				
	10. Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.				
	Tenderers are to price twice the rate of unskilled local labour rate against this item for any and all costs arising out of compliance with the foregoing and in the event of a Tenderer failing to price against this item or making inadequate financial provision against this item for compliance as aforesaid, then no claim for costs or additional cost incurred will be entertained by the Principal Agent.				
	F:..... V:..... T:.....	Item			
117	PROMOTION OF TRANSFORMATION				
	PRASA has taken a strategic decision to promote transformation in line with its SCM Policy. Based on the above tenderer must promote Supplier Development through involving Small Business Enterprises residing within the municipal ward.				
	F:..... V:..... T:.....	Item			
	<u>SUMMARY OF CATEGORIES</u>				
	Category : Fixed R.....				
	Category : Value R.....				
	Category : Time R.....				
	Carried to Final Summary			R	
	Section No. 1				
	Bill No. 1				
	Preliminaries				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>				
	<u>BILL NO. 1</u>				
	<u>ALTERATIONS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Breaking up and removing reinforced concrete, including cutting off and removing reinforcement</u>				
1	100mm Thick concrete surface bed	m2	18		
	<u>Cutting through</u>				
2	Carefully saw cut and break up 100mm thick surface bed to accommodate new concrete strip footings not exceeding 2m deep in earth including backfilling and compaction (Strip footings elsewhere measured)	m	62		
	<u>Temporary roof protection, etc. including removal:</u>				
	Contractors will be held responsible for all damages, however caused, to ceilings, finishes, etc. inside rooms where the existing roof coverings have been removed and he must make good all damages at his own expense to the approval of the Principal Agent				
3	Cover and maintain existing roofs in a perfectly watertight condition during alterations by means of heavy tarpaulins properly secured and maintained in position to the approval of the Principal Agent and make good all work damaged or distributed after completion.	m2	461		
	Carried Forward			R	
	Section No. 2 Bill No. 1 Alterations				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
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	Brought Forward			R	
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
4	Carefully take out and remove existing slate roof tiles including sislotion, timber battens, etc.	m2	492		
5	Carefully take out and remove existing side cladding slate roof tiles including sislotion, timber battens, etc.	m2	131		
6	Carefully take out and remove damaged steel purlins	m	379		
7	Carefully take out and removed damaged fibre cement fascia board	m	49		
8	Carefully remove timber slates fixed to soffit of structural steel trusses, etc.	m2	193		
9	Carefully remove timber and/or gypsum board dry walls	m2	166		
	<u>Take out and remove doors, windows etc from brickwork to remain including making good cement plaster on both sides</u>				
10	Timber single door and frame 813 x 2032mm high overall	No	20		
11	Bulletproof window size 630 x 1050mm	No	8		
12	Steel window size 2400 x 600mm high	No	4		
13	Steel window size 2900 x 600mm high	No	1		
14	Roller shutter door size 630 x 1050mm high	No	8		
	<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc</u>				
15	Vinyl tiles to floors, including 30mm screeds	m2	27		
16	Carpet to floors, including 30mm screeds	m2	178		
17	75mm High timber skirting to walls	m	224		
18	Tiles to walls	m2	110		
	Carried Forward			R	
	Section No. 2				
	Bill No. 1				
	Alterations				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Take out and remove piping, sanitary fittings, etc., including disconnecting piping from fittings and make good floor and wall finishes</u>				
19	Vitreous china wash hand basin, including short lengths of piping, etc	No	2	
20	Vitreous china WC pan with cistern, including short lengths of piping, etc	No	2	
21	Stainless steel sink and drainer on timber cupboard approximate size 1200 x 600 x 900mm high and including short lengths of piping, etc.	No	1	
22	10 Litre Hydroboil including short lengths of piping, etc.	No	1	
<u>Taking out/off and removing glass and mirrors</u>				
23	Mirror 600 x 600mm high from wall	No	2	
<u>Taking out and removing sundry joinery work, fittings, etc</u>				
24	Timber kitchen floor cupboard 1800 x 600 x 900mm high including work top	No	1	
25	Timber floor cupboard 2250 x 600 x 900mm high including work top	No	4	
26	Timber floor cupboard 2500 x 600 x 900mm high including work top	No	4	
<u>PREPARATORY WORK TO EXISTING PLASTER SURFACES</u>				
<u>Making good cement plaster</u>				
27	Chase out existing damaged plaster from walls, apply "Sika Plasterstik" or other equally approved bonding agent to manufacturer's specifications and re-plaster walls with 1:4 cement mortar, including floating up smooth or textured plaster to match existing	m2	60	
<u>Concrete spalling</u>				
Carried Forward				R
Section No. 2 Bill No. 1 Alterations				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
	<p><u>Concrete spalling to existing concrete surfaces to included saw cut, break back 50mm to remove loose concrete aggregates and to expose steel, clean & wire brush steel, apply ABE Durarep ZR primer or similar approved to steel, apply Epidermix 344 or similar approved, apply ABE Durarep FR or similar approved 50mm thick, etc. all in accordance to engineer specifications</u></p>		
28	Existing concrete surfaces	m2	5
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>		
29	Pressure clean down external facebrick walls and seal with an approved sealer	m2	458
30	Pressure clean down external grill block walls and seal with an approved sealer	m2	126
31	Remove damaged face bricks and replace with new to match existing	m2	46
32	Making good to defects in concrete floors with "Sika" or other approved	m2	10
	<u>BUILDING UP OPENINGS</u>		
	<u>Sundries</u>		
33	Cutting toothings and bonding new brickwork to existing	m2	3
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 1			
Alterations			

Item No	Quantity	Rate	Amount
<u>BILL NO. 2</u>			
<u>EARTHWORKS</u>			
<u>PREAMBLES</u>			
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Nature of ground</u>			
<p>Tenderers must acquaint themselves with the nature of the material to be excavated and also refer to the attached geotechnical investigation report annexed to the Bills of Quantities.</p>			
<u>Carting away of excavated material</u>			
<p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p>			
<u>Excavation for working space in rock</u>			
<p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over"bulk excavation or trench and hole excavation as the case may be</p>			
<u>Filling</u>			
<p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.</p>			
Carried Forward		R	
<p>Section No. 2 Bill No. 2 Earthworks</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Testing</u>			
Prices for filling are to include for all necessary density tests in accordance with SABS 1200D			
<u>RESTRICTIVE EXCAVATIONS</u>			
<u>Restrictive excavations in earth not exceeding 2m deep</u>			
1	Trenches	m3	18
<u>Extra over trench and hole excavations in earth for excavation in</u>			
2	Intermediate material	m3	4
<u>Extra over all excavations for carting away</u>			
3	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	13
<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1,5m deep	m2	62
<u>Keeping excavations free of water</u>			
5	Keeping excavations free of all water other than subterranean water		Item
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density.</u>			
6	Backfilling to trenches, holes, etc.	m3	5
<u>Earth filling supplied by the contractor, compacted to 95% Mod. AASHTO density</u>			
7	Under floors of G5 material in accordance with SABS 1200 DM and compacted to 95% Mod. AASHTO density	m3	3
Carried Forward			R
Section No. 2 Bill No. 2 Earthworks			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>Compaction of surfaces</u>			
8	Compaction of ground surface under floors, etc. including grading, levelling and scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod. AASHTO density	m2	18
<u>Prescribed density tests on filling</u>			
9	Modified AASHTO Density tests	No	6
<u>SOIL POISONING</u>			
<u>brand of anti-termite soil poison applied by a registered Pest Control company and guaranteed against termite infestation for ten years</u>			
10	Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc. filling in furrows and ramming	m2	18
11	To bottoms and sides of trenches, etc.	m2	80
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 2			
Earthworks			

Item No	Quantity	Rate	Amount
<u>BILL NO. 3</u>			
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>PREAMBLES</u>			
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Cost of tests</u>			
<p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Engineer. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Engineer. (Test cubes are measured separately)</p>			
<u>Breeze concrete</u>			
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>			
<u>Lightweight concrete</u>			
<p>Lightweight concrete shall have a density of 600kg/m3 for the top 50mm and 400kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm</p>			
Carried Forward		R	
<p>Section No. 2 Bill No. 3 Concrete, Formwork and Reinforcement</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward		R
<p><u>Formwork</u></p> <p>Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p>Formwork to soffits of solid, etc. shall be deemed to be slabs not exceeding 250mm thick unless otherwise described and propping not exceeding 3,5m high unless otherwise stated. Formwork to walls and columns is not exceeding 3,5m high above bearing level unless otherwise stated.</p>		
Carried Forward		R
<p>Section No. 2</p> <p>Bill No. 3</p> <p>Concrete, Formwork and Reinforcement</p>		

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Polished Concrete:</u>			
<p>It must be noted that where polished concrete finishes are required, the pouring and polishing of such concrete should be done by the same specialist contractor.</p> <p>The Contractor is to allow for sufficient and adequate protection of all concrete surfaces which are to have a polished finish surface.</p> <p>To achieve the optimum aesthetic finish to the floors, the casting and finishing of such concrete in connection with the laying process is of extreme importance, requiring a high degree of accuracy in placing. When grinding, the top surface of the concrete is exposed and any defects such as cracks, pores and 'gumboot marks' that originated during casting will become evident and will not be accepted and it will be required that such defects are corrected to the complete satisfaction of the Architect.</p> <p>Place concrete to a FM2 tolerance using a bull float. Separation of aggregate from walking in the green concrete is to be prevented and avoided.</p> <p>Saw cutting where required is to be done in squares to minimise the risk of shrinkage cracks and shall be done timeously within 12 hours of placing the concrete.</p> <p>During the grinding and polishing process all depressions and imperfections must be corrected and repaired to the satisfaction of the Architect.</p> <p>During grinding and polishing the required silicate densifier and stain resistant products shall be applied in accordance with the manufacturer's specifications.</p> <p>A sample panel of the polished finish is to be provided for the Architect's approval prior to any work commencing.</p>			
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
<u>25MPa/19mm concrete</u>			
1	Strip footings	m3	6
2	Surface beds on waterproofing	m3	3
Carried Forward			R
Section No. 2 Bill No. 3 Concrete, Formwork and Reinforcement			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>TEST CUBES</u>			
3	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
4	Surface beds, slabs, etc,	m2	18	
	<u>MOVEMENT JOINTS ETC</u>			
	<u>Expansion joints with 12mm bitumen impregnated softboard between vertical concrete surfaces, including necessary formwork</u>			
5	12mm Joints not exceeding 300mm high	m	62	
	<u>REINFORCEMENT (PROVISIONAL)</u>			
	<u>Fabric reinforcement</u>			
6	Type ref. 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	18	
Carried Forward to Summary of Section No. 2				R
Section No. 2				
Bill No. 3				
Concrete, Formwork and Reinforcement				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Quantity	Rate	Amount
<u>BILL NO. 4</u>			
<u>MASONRY</u>			
<u>PREAMBLES</u>			
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>SAMPLES</u>			
<p>Samples of masonry building units to be provided before construction commences</p>			
<u>SIZES IN DESCRIPTIONS</u>			
<p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p>			
<u>HOLLOW WALLS</u>			
<p>Descriptions of hollow walls shall be deemed to include every fifth perpend of the bottom course of the external skin open as a weep hole</p>			
<u>BAGGED AND SEALED WALLS</u>			
<p>User Note: The following preamble generally applies for works in hot and humid coastal areas.</p> <p>Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating.</p>			
<p style="text-align: right;">Carried Forward</p>			R
<p>Section No. 2 Bill No. 4 Masonry</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>FACE BRICKS</u>			
Bricks shall be ordered timeously to obtain uniformity in size and colour.			
All facebrick work is to be protected from other finishing trades during the construction period.			
All interior face brickwork is to receive two coats water based silicone sealant at completion including preparatory work as per manufacturer's instructions.			
<u>POINTING</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing etc.			
<u>FOUNDATIONS (PROVISIONAL)</u>			
<u>Brickwork of NFX bricks in class II mortar</u>			
1	Half brick walls	m2	22
<u>SUPERSTRUCTURE</u>			
<u>Brickwork of NFX bricks in class II mortar</u>			
2	Half brick walls	m2	83
<u>BRICKWORK SUNDRIES</u>			
<u>2.5mm Galvanised brickwork reinforcement</u>			
3	75mm Wide reinforcement built in horizontally	m	325
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>			
4	75 x 110mm Lintels in lengths not exceeding 3m	m	10
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 4			
Masonry			

Item No		Quantity	Rate	Amount
	<u>BILL NO. 5</u>			
	<u>WATERPROOFING</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Waterproofing to SABS 021</u>			
	Waterproofing shall be laid under a 10 year written guarantee for site workmanship and watertightness and to be laid to even falls to outlets etc. Descriptions of sheet or membrane waterproofing shall be deemed to include for additional labour to turn-ups and turn downs			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer of 375 micron "Consol Plastics Brikgrip DPC" or other equally approved embossed damp proof course</u>			
1	In walls	m2	4	
	<u>One layer of 375 micron "Consol Plastics" or other equally approved waterproof sheeting sealed at laps</u>			
2	Under surface beds	m2	18	
	<u>JOINT SEALANTS ETC</u>			
	<u>"Sika" or other equally approved two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u>			
3	12 x 12mm In horizontal expansion joints including raking out expansion joint filler as necessary	m	62	
	Carried Forward to Summary of Section No. 2			
	Section No. 2			
	Bill No. 5			
	Waterproofing			
			R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 6</u>				
	<u>ROOF COVERING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>SHEETING</u>				
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.				
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.				
	<u>FIXING SAFLOK</u>				
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-				
	Carried Forward				
	Section No. 2 Bill No. 6 Roof Coverings			R	

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 2 Bill No. 6 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 2 Bill No. 6 Roof Coverings</p>			R	
			R	

Brought Forward			R
<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturer's recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	492
2	Side cladding	m2	131
Carried Forward			R
<p>Section No. 2 Bill No. 6 Roof Coverings</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>Sundries</u>			
3	Barge flashing 660mm girth	m	63
4	Fascia flashing 550mm girth	m	49
5	Bottom flashing 550mm girth (Bottom of cladding)	m	85
6	Head wall flashing 550mm girth	m	23
7	Counter flashing	m	23
<u>ROOF INSULATION</u>			
<u>"Sisalation FR 430" heavy industrial grade aluminium foil based insulation</u>			
8	Insulation laid taut over purlins at 1200mm centres and fixed concurrent with roof covering, with stapled longitudinal flap joints including galvanised steel straining wires not exceeding 300mm centres and fixing at top and bottom edges to purlins with and including hoop iron straps.	m2	623
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 6			
Roof Coverings			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

[illegible]

Brought Forward					R
	<p><u>"Mutual Safes" or other equally approved G2 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS angle rebates, overall size 930 x 2100mm high in paint finish with 250 X 500mm high BRG viewing panel glazed in 38mm thick bullet resistant glass with one-way vision film, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door close rand D-style pull handles. Door to comply to SABS 1658-1996</u></p>				
5	930 x 2100mm high hung to steel frames	No	10		
	<p><u>EXTERNAL ANTI-BANDIT DOOR</u></p> <p><u>"Mutual Safes" or other equally approved Level G3 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS angle rebates, overall size 930 x 2100mm high in powder coating and or galvanised cladding with peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996</u></p>				
6	930 x 2100mm high hung to steel frames	No	2		
	<p><u>JOINERY, CUPBOARDS & WORKTOPS</u></p>				
Carried Forward					R
<p>Section No. 2 Bill No. 7 Carpentry and Joinery</p>					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Existing Staff Room</u>				
7	Wall shelf unit made of white melamine carcass with vancouver maple melamine for cupboard doors, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Wall unit to be mounted on wall as per supplier recommendation. Overall size of the unit 2115mm long x 600mm wide x 800mm high. Unit comprises two (2) door and one (1) open shelf. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
8	Floor unit made of work top formed of 40mm formica work top with bull nose, white in colour, and white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor and wall as per supplier recommendation. Overall size of the unit 2215mm long x 600mm wide x 900mm high. Unit comprises cut out for single / double bow sink drop in (sink supplied by others), base, three (3) doors and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
<u>Existing Ticket Offices</u>				
9	Floor unit made of work top formed of 32mm "Rustenberg" granite work top with bull nose. Work top to be fixed on to wall bracket as per supplier recommendation. Overall size of unit 2250mm long x 600mm wide. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	4	
10	Floor unit made of work top formed of 32mm "Rustenberg" granite work top with bull nose. Work top to be fixed on to wall bracket as per supplier recommendation. Overall size of unit 2500mm long x 600mm wide. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	4	
11	Extra over work top for circular cutting (Radius 420) including bull nose edge	No	8	
12	Extra over work top for coring 64mm diameter including	No	8	
Carried Forward				R
Section No. 2 Bill No. 7 Carpentry and Joinery				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
13	Floor unit made white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor, wall and underside of worktop as per supplier recommendation. Overall size of unit 550mm long x 600mm wide x 900mm high. Unit comprises base, one (1) door and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	8	
	<u>Kitchen</u>			
14	Wall shelf unit made of white melamine carcass with vancouver maple melamine for cupboard doors, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Wall unit to be mounted on wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 800mm high. Unit comprises four (2) doors and one (1) open shelf. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
15	Floor unit made of work top formed of 40mm formica work top with bull nose, white in colour, and white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor and wall as per supplier recommendation. Overall size of the unit 2215mm long x 600mm wide x 900mm high. Unit comprises cut out for single / double bow sink drop in (sink supplied by others), base, three (3) doors and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
	Carried Forward			R
	Section No. 2 Bill No. 7 Carpentry and Joinery			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
Office			
16	<p>Wall shelf unit made of white melamine carcass with vancouver maple melamine for cupboard doors, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Wall unit to be mounted on wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 800mm high. Unit comprises one (1) door and one (1) open shelf. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.</p>	No	1
17	<p>Floor unit made of work top formed of 40mm formica work top with bull nose, white in colour, and white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor and wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 900mm high. Unit comprises cut out for single / double bow sink drop in (sink supplied by others), base, three (3) doors and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.</p>	No	1
Carried Forward to Summary of Section No. 2			R
<p>Section No. 2 Bill No. 7 Carpentry and Joinery</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 8				
	IRONMONGERY				
	PREAMBLES				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	LOCKSETS, ETC				
	Manufactured by "Dormakaba" or other equally approved				
1	Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. (D037D SS)	No	1		
2	Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm. (D036S SS)	No	17		
3	Bathroom Deadlock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. (D032D SS)	No	2		
4	Bathroom WC indicator (Red and white) and turnknob (Code: DWC-005)	No	2		
5	43mm five pin Euro-profile Single Cylinder Grand Master Keyed (DSC104301 GMK)	No	1		
6	66mm five pin Euro-profile Double Cylinder Grand Master Keyed (DDC106601 GMK)	No	9		
7	66mm five pin Euro-profile knob cylinder master keyed (Code: DKC106601 MK - 66mm)	No	8		
	HANDLES				
	Carried Forward			R	
	Section No. 2 Bill No. 8 Ironmongery				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward					R
<u>Manufactured by "Dormakaba" or other equally approved</u>					
8	DPH301C Pull handle BT fixed on a 75 x 170 x 1.2mm thick Grade 430 stainless steel plate with no cylinder cutout. Stainless steel plate to have 4 countersunk holes for screw fixing. (Code: DHP-430-BL-SF 75 x 170)	No	2		
9	75 x 170 x 1.2mm thick Grade 430 stainless steel plate to have 4 countersunk holes for screw fixing. (Code: DPP-430-BL-SF-75x170)	No	2		
10	DPH301C Pull handle BT fixed on a 150 x 300 x 1.2mm thick grade 430 stainless steel plate with no cylinder cutout. Stainless steel plate to have 6 countersunk holes for screw fixing. (Code: DHP-430-BL-SF 150 x 300)	No	1		
11	150 x 300 x 1.2mm thick Grade 430 stainless steel plate with cylinder cutout right. Stainless steel plate to have 6 countersunk holes for screw fixing. (Code: DPP-430-CR-SF150 x 300)	No	1		
12	Lever handle on 170 x 170mm plate with cylinder cutout (Code: TH120 BP Cyl S.S)	No	17		
<u>PUSH PLATES AND KICK PLATES</u>					
<u>Manufactured by "Dormakaba" or other equally approved</u>					
13	300 x (width of door) x 1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door) (DKP-430-SF 300)	No	36		
<u>LETTERS, NAMEPLATES, ETC</u>					
<u>Manufactured by "Dormakaba" or other equally approved</u>					
14	150 x 150mm MALE sign (Code: DSS-130 M)	No	1		
15	150 x 150mm FEMALE sign (Code: DSS-131 F)	No	1		
16	150 x 150mm TEA CUP sign (DSS-135 TC)	No	1		
17	150 x 150mm ELECTRICAL sign (Code: DSS-136 EL)	No	1		
Carried Forward					R
Section No. 2 Bill No. 8 Ironmongery					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward					R
<u>STATUTORY SIGNAGE</u>					
<u>Statutory signage to be SABS approved and photo luminescent, external signage to be UV rated</u>					
<u>Red and white single sided signage screwed fixed on to walls as per manufacturer's details</u>					
18	190 x 190mm Arrow sign	No	10		
19	190 x 190mm Fire extinguisher sign	No	4		
20	190 x 190mm Fire hose reel sign	No	2		
21	190 x 190mm Fire hydrant sign	No	2		
22	190 x 190mm Twin booster sign	No	1		
23	300 x 200mm Fire exit keep clear sign	No	1		
<u>Green and white single sided signage screwed fixed on to walls as per manufacturer's details</u>					
24	190 x 190mm Arrow sign	No	2		
25	190 x 190mm Running man sign	No	2		
<u>Red and white double sided signage suspended 1m below suspended ceilings / soffit of slabs by chains as per manufacturer's details</u>					
26	Combination of 4 No. of 190 x 190mm signage. Signage include arrow, fire hose reel, fire extinguisher and fire hydrant	No	1		
27	Combination of 3 No. of 190 x 190mm signage. Signage include arrow, fire hose reel and fire extinguisher	No	1		
<u>Green and white double sided signage suspended 1m below suspended ceilings / soffit of slabs by chains as per manufacturer's details</u>					
28	Combination of 3 No. of 190 x 190mm signage. Signage include running man, arrow and wheel chair	No	1		
Carried Forward					R
Section No. 2 Bill No. 8 Ironmongery					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
	<u>Green, red and white double sided signage suspended 1m below suspended ceilings / soffit of slabs by chains as per manufacturer's details</u>				
29	Combination of 5 No. of 190 x 190mm signage. Signage include running man & arrow (green) and fire hose reel, fire extinguisher & arrow (red)	No	1		
	<u>NON-STATUTORY SIGNAGE (PRASA SPECIFICATION)</u>				
	<u>Projecting: Iconography</u>				
30	Double sided signage, non-illuminated overall size 500 x 500mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.1, page 4 of 12 of Prasa Specification, for full details.	No	4		
31	Double sided signage, non-illuminated overall size 600 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.2, page 4 of 12 of Prasa Specification, for full details.	No	2		
	<u>Internal Signage: Digitally printed</u>				
32	Wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.2, page 11 of 12 of Prasa Specification, for full details.	No	4		
33	Door and wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J2.1, page 11 of 12 of Prasa Specification, for full details.	No	2		
	<u>DOOR CLOSURE</u>				
	<u>Manufactured by "Dormakaba" or other equally approved</u>				
34	NON HOLD OPEN Cam action slide channel door closer. Max door width 950mm. Closing Force EN 3. Hydraulic speed control. Pull-side door leaf fixing (Standard), Push-side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120, MM/IMM 240. Certified manufacturer to ISO 9001 (TS91B - SL)	No	1		
	Carried Forward			R	
	Section No. 2 Bill No. 8 Ironmongery				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>BATHROOM FITTINGS</u>				
35	"Franke Rodan RODX672" or other equally approved 0,8mm thick satin finished stainless steel double toilet roll holder with spindle system (Code: 359987), size 144 x 138 x 301mm high for 2 rolls maximum 120mm diameter with cylinder lock with standard Franke Key, plugged and screwed to the wall with stainless steel screws.	No	2	
36	"Bathroom Butler Series 4600" or other equally approved paper holder type II in polished grade 304 stainless steel finish (Code: 4602POLS), overall size 180 x 97 x 100mm, plugged and screwed to wall with stainless steel screws.	No	1	
37	"Bathroom Butler Series 4600" or other equally approved single rail in polished grade 304 stainless steel finish (code: 4678POLS), overall size 1125 x 105 x 50mm, plugged and screwed to wall with stainless steel screws.	No	1	
38	"XLerator 2.5Kw" or other equally approved 270W x 240H x 200Dmm Automatic Electric Stainless Steel Hand Dryer - CLX2500 or other equally approved satin finish stainless steel casing	No	1	
<u>"Chilli-B" or other equally approved:</u>				
39	Soap dispenser (code: P-SDM-650) bolted to walls including all necessary fittings	No	1	
<u>BLINDS</u>				
<u>"Windowvert" or other equally approved</u>				
40	Vertical slatted blinds 100mm wide to fit opening 2400 x 600mm high opening	No	4	
41	Vertical slatted blinds 100mm wide to fit opening 2900 x 600mm high opening	No	1	
<u>SUNDRIES</u>				
Carried Forward				R
Section No. 2 Bill No. 8 Ironmongery				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<p><u>BILL NO. 9</u></p> <p><u>STRUCTURAL STEEL</u></p> <p><u>PREAMBLES</u></p> <p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
<p>Carried Forward</p>				R
<p>Section No. 2 Bill No. 9 Structrual Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 2</p> <p>Bill No. 9</p> <p>Structrual Steel</p>				

Brought Forward			R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>			
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>			
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>			
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	t	1.52
<p><u>SUNDRY STEELWORK</u></p>			
<p><u>Sundry Steelwork</u></p>			
2	Cleats, plates, gussets, connectors, etc	t	0.35
<p>Carried Forward to Summary of Section No. 2</p> <p>Section No. 2 Bill No. 9 Structural Steel</p>			R

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 10</u>				
	<u>METALWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>				
	<u>1.2mm Double rebated frames suitable for one brick wall</u>				
1	Frame for door 813 x 2032mm high	No	7		
	<u>EXPANDING SECURITY GATES</u>				
	<u>'Trellidoor' or other equally approved composite epoxy powder coated galvanised mild steel expanding security gate complete with floor rail, soffit guide and lock</u>				
2	Security gate size 900 x 2000mm high.	No	4		
	<u>HOT DIPPED GALVANISED STEEL BURGLAR BARS</u>				
	<u>50 x 50mm Hot dipped galvanised vertical bars with rounded ends and polished edges and fixed to wall with 10mm diameter counter sunk expansion bolts through 19mm diameter steel pipe spacers with bolt heads securely epoxy fixed to frame. 19mm Diameter hot dipped galvanised steel pipes equally spaced and welded to vertical falt bars.</u>				
3	Burglar bar size 2400 x 600mm high. Tenderers are referred to Architects drawings annexed to these Bills of Quantities	No	4		
4	Burglar bar size 2900 x 600mm high. Tenderers are referred to Architects drawings annexed to these Bills of Quantities	No	1		
	Carried Forward			R	
	Section No. 2 Bill No. 10 Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
<u>ANODISED ALUMINIUM LOUVRE UNITS</u>				
<u>'Trox' or other equally approved natural anodised louvre units screwed into wooden door</u>				
5	Type AGS-T size 400mm wide x 400mm high	No	2	
<u>ALUMINIUM WINDOWS, ETC.</u>				
<u>Aluminium window complete with subframes, ironmongery, glass, sealing, etc., and fixing to brickwork or concrete</u>				
<u>Glazing thickness in accordance with table 1 of SANS 10400 Part 'N'</u>				
6	Purpose made 'natural anodised' powder coated aluminium window including opening panel, all glazing with 6.38mm Low-E glazing, overall size 2400 x 600mm high. Tenderers are referred to Architect's drawings annexed to these Bills of Quantities	No	4	
7	Purpose made 'natural anodised' powder coated aluminium window including opening panel, all glazing with 6.38mm Low-E glazing, overall size 2900 x 600mm high. Tenderers are referred to Architect's drawings annexed to these Bills of Quantities	No	1	
<u>MANUAL PUSH-UP AND CHAIN OPERATED ROLLER SHUTTER DOORS</u>				
<u>"Roll-Up Serranda" or other approved perforated galvanised, SABS 1461, & epoxy coated M/S manually operated push-up and hand chain operated with standard bottom rail, 75 x 0.8mm thick end-locked slats, 120mm extra-wide tamper proof guides, 4.5mm end plates, closed shaft and 2 x slide bolts, extruded with Aluminium T-bar & Astragal rubber weather seal. Including galv. cover box and powder coated components incl. door curtain, end plates, cover box, guides & T-bar. Door fixed to brick, concrete or structural steel jambs and concrete or steel lintel over. Contractor to provide cavity of 160mm x 120mm for recessing guides.</u>				
8	630 x 1050mm High chain operated roller shutter Door	No	8	
Carried Forward to Summary of Section No. 2				R
Section No. 2				
Bill No. 10				
Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 12</u>				
	<u>TILING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Fixing</u>				
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.				
	Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for tiling key-coat.				
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the Tal Professional range of products as recommended by the manufacturer.				
	<u>WALL TILING</u>				
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE20 A 600AH) with 3mm grouting fixed with 'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
1	On walls (Black)	m2	55		
2	On narrow widths	m2	6		
	Carried Forward			R	
	Section No. 2 Bill No. 12 Tiling				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE SPA 6100 3x6 AH) with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
3	On walls (Ivory)	m2	55	
4	On narrow widths	m2	6	
	<u>FLOOR TILING (Internal)</u>			
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6879N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
5	On floors (Light grey)	m2	164	
6	300mm High skirting	m	179	
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6876N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
7	On floors (Dark grey)	m2	41	
8	300mm High skirting	m	45	
	<u>SUNDRIES</u>			
	<u>"Genesis" or other equally approved edge trims:</u>			
9	27 x 10 x 10mm aluminium square edge trim (Code: TDF 104.81)	m	255	
10	21 x 10mm aluminium straight edge trim (Code: ESA 100.80)	m	2	
	Carried Forward			R
	Section No. 2			
	Bill No. 12			
	Tiling			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 13</u>				
	<u>PLUMBING AND DRAINAGE</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>RAINWATER DISPOSAL</u>				
	<u>0.8mm Seamless aluminium proprietary gutter and rainwater pipe system with baked enamel finish</u>				
1	Purpose made 200 x 150mm Square eaves gutters fixed to rafter	m	49		
2	Extra over gutter for outlet	No	4		
	<u>0.8mm Fluted aluminium down pipes with baked enamel finish</u>				
3	120 x 90mm Rainwater pipe	m	16		
4	Extra on rainwater pipe for bend	No	8		
5	Extra on rainwater pipe for shoe	No	4		
	<u>SANITARY FITTINGS</u>				
	<u>WC</u>				
6	"Vaal Sanitaryware" or other equally approved vitreous china Parktown 90 degree outlet top inlet or back inlet flushvalve (code: 431600) and double flap plastic seat	No	2		
7	"Grohe" or other equally approved 25mm diameter chrome flush valve for wc (code: 37609) for concealed installation with push button actuator, 1.2 - 5.0 bar flow pressure, flow rate adjustment, including 25mm supply pipe, stop valve, flush pipe and 300mm extension pipe to wc.	No	2		
	Carried Forward			R	
	Section No. 2 Bill No. 13 Plumbing and Drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Wash Hand Basin</u>			
8	"Vaal Sanitaryware" or other equally approved Iceberg Vitreous china drop-in vanity basin colour White (Code: 7034), size 420 x 420mm fitted into opening in granite vanity top (vanity top elsewhere measured) and sealed with silicone sealant where basin rim meets vanity top.	No	2
9	"Idral" or other equally approved water save self-closing push button pillar tap, non-hold cold water supply only, chrome finish, (code: 08212) with flow time of 6 - 9 secs.	No	2
10	GH angle valve bau 15x15mm	No	2
11	303-32 Basin waste	No	2
12	ISM Gio bottle trap CP 32mm	No	2
<u>Kitchen Sink - Single Bowl</u>			
13	"Franke" or other equally approved Projectline Model PLN611 stainless steel single end bowl inset sink (Code: 821047), overall size 800 x 460mm wide with one 340 x 370 x 150mm deep bowl, fitted onto cupboard (cupboard elsewhere measured) including clear silicon, 38mm waste fitting and PVC trap (trap elsewhere measured).	No	1
14	"Cobra Watertech Noka" or other equally approved 15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges (code: NA-970), manufactured in accordance with SANS 226:2004 Type 1 (BS 5412).	No	1
15	GH angle valve bau 15x10mm	No	2
16	32 x 40mm Butyl rubber "P" or "S" trap jointed to waste outlet fitting and uPVC pipe including clamps	No	1
<u>TAPS, VALVES, ETC.</u>			
Taps, valves, etc. jointed to copper pipes are to include brass connectors, adaptors etc. Installation and fixings to be as per manufacturers specifications and SANS 1808-9 compliant.			
17	15mm Ball-O- stop valves	No	4
Carried Forward			R
Section No. 2 Bill No. 13 Plumbing and Drainage			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R	
	<u>Thermaflex snap on sectional pipe insulation, neatly cut around pipe as required</u>				
44	Insulation to 15mm diameter piping and couplings including working around fittings	m	2		
	<u>ELECTRIC WATER HEATERS</u>				
	<u>Water heaters and accessories:</u>				
45	10 Litre "Hydroboil" or other equally approved over sink electric water heater	No	1		
	<u>TESTING</u>				
46	Allow for testing the whole of the Stormwater drainage, Sewer drainage, Plumbing, Water and Fire supplies and all fittings to the satisfaction of the Architect, Engineer and Local Authorities. All defective work is to be taken out and replaced at the contractor's expense and the whole re-tested until acceptable		Item		
	<u>AS-BUILT DRAWINGS</u>				
47	Provide a full set of as-built drawings on completion of the installation		Item		
Carried Forward to Summary of Section No. 2				R	
Section No. 2					
Bill No. 13					
Plumbing and Drainage					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 14				
	GLAZING				
	PREAMBLES				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	MIRRORS				
	<u>Mirrors shall be silver float glass with polished edges all round and holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>				
1	6mm Mirror size 600 x 750mm, four times holed and fixed to plastered wall	No	2		
	Carried Forward to Summary of Section No. 2			R	
	Section No. 2 Bill No. 14 Glazing				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 15</u>				
	<u>PAINTWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>PREPARATORY WORK TO EXISTING WORK</u>				
	<u>Previously painted plastered surfaces</u>				
	Surfaces shall be thoroughly water pressure cleaned and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished to match existing surfaces.				
	<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u>				
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved Primer (PP700) and two coats "Velvagro" water based paint for interior use</u>				
1	On walls	m2	329		
2	On narrow widths	m2	16		
	<u>ON EXISTING CONCRETE FLOOR SURFACES</u>				
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved Primer (PP700) and two coats "Velvagro" water based paint for interior use</u>				
3	On soffit of coffer slab	m2	253		
	Carried Forward			R	
	Section No. 2 Bill No. 15 Paintwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>ON METAL SURFACES</u>			
<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>			
4	On posts	m2	15
5	On doors	m2	8
<u>PAINTWORK, ETC TO NEW SURFACES</u>			
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>			
<u>"Plascon" or other equally approved Primer (PP700) and two coats "Velvaglo" water based paint for interior use</u>			
6	On walls	m2	166
7	On narrow widths	m2	8
<u>ON METAL SURFACES</u>			
<u>One coat calcium plumbate primer on:</u>			
8	Backs of galvanised steel door frames before fixing	m2	40
<u>"Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>			
9	On door frames	m2	40
10	On burglar guard	m2	18
<u>ON WOOD SURFACES</u>			
<u>"Plascon" or other equally approved primer, one coat alkyd based universal undercoat and two coats professional gloss enamel paint</u>			
11	On Doors	m2	78
Carried Forward			R
Section No. 2 Bill No. 15 Paintwork			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
	<u>Prepare and apply two coats "Plascon" or other equally approved mat varnish</u>		
12	On timber slate ceilings	m2	193
	<u>ON PLASTERBOARD SURFACES</u>		
	<u>"Plascon" or other equally approved gypsum and plaster primer (PP700) and two coats professional super matt (PEM 900/TSA) for interior use</u>		
13	On cornices	m	224
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 15			
Paintwork			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 16</u>			
	<u>EXTERNAL WORKS (ALL TRADES)</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>Alterations</u>			
	<u>Saw cut, breaking up and removing concrete block pavers including reducing ground by 150mm deep</u>			
1	Parking area	m2	42	
	<u>Earthworks</u>			
	<u>Excavation other than bulk</u>			
2	Compaction of ground surfaces, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	42	
3	150mm Thick layer of G5 sub-base course under platforms, etc., with selected and natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 95% Mod. AASHTO density.	m3	6	
4	Allow for the execution of all the prescribed density tests on filling, etc., as pointed out by the Engineer on site to the approval of the Principal Agent.		Item	
	<u>Paving</u>			
5	50mm Concrete block paver to match existing including 20mm thick river sand, weed poisoning on compacted ground surfaces (compacted ground surfaces elsewhere measured)	m2	42	
	<u>Metalwork</u>			
	Carried Forward		R	
	Section No. 2 Bill No. 16 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Galvanised steel palisade fencing:</u>				
6	1,8m High palisade fencing comprising of 2,2m high posts at 2,0m centres, V-type top and bottom rails and thirteen 1,8m high pales between posts, set up and fixed complete including 400 x 400 x 600mm concrete base to posts	m	150	
7	Extra over fencing for 900 x 1800mm high single gate	No	2	
<u>MAIN STATION SIGNAGE</u>				
<u>Non-Statutory Signage (Prasa Specification)</u>				
<u>Pylons: Naming</u>				
8	Double sided signage, illuminated and non-illuminated overall size 500 x 3000mm high signage, fixed on steel post approximate 6000mm high including 1000mm cast into concrete base. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type D1.2, page 5 of 12 of Prasa Specification, for full details.	No	2	
Carried Forward to Summary of Section No. 2				R
Section No. 2				
Bill No. 16				
External Works				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 1</u>				
<u>ALTERATIONS</u>				
<u>PREAMBLES</u>				
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
<u>REMOVAL OF EXISTING WORK</u>				
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
1				
	Carefully take out vandalised metal roof sheeting in patches including screws, sisalation, and preparing existing steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	64	
2	Carefully take out and remove damaged steel purlins	m	56	
<u>Carefully take out and remove gutters and downpipes etc.</u>				
3	Existing metal box gutter	m	9	
4	Existing 110mm metal downpipes including outlet, bends & shoe	m	6	
<u>Carefully take out and remove gutters and downpipes etc.</u>				
5	Existing barge flashing, girth 550mm	m	32	
Carried Forward to Summary of Section No. 3				
Section No. 3				
Bill No. 1				
Alteration Works				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 2</u>				
	<u>ROOF COVERING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>SHEETING</u>				
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.				
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.				
	<u>FIXING SAFLOK</u>				
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-				
	Carried Forward				
	Section No. 3 Bill No. 2 Roof Coverings			R	

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 3 Bill No. 2 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 3 Bill No. 2 Roof Coverings</p>			R	
			R	

	Brought Forward			R
	<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	64	
	Carried Forward			R
	<p>Section No. 3 Bill No. 2 Roof Coverings</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		Brought Forward			R
	<u>Sundries</u>				
2	Gutter flashing 300mm girth	m	9		
3	Barge flashing 660mm girth	m	32		
Carried Forward to Summary of Section No. 3					R
Section No. 3 Bill No. 2 Roof Coverings					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<p><u>BILL NO. 3</u></p> <p><u>STRUCTURAL STEEL</u></p> <p><u>PREAMBLES</u></p> <p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
<p>Carried Forward</p>				R
<p>Section No. 3 Bill No. 3 Structrual Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 3</p> <p>Bill No. 3</p> <p>Structrual Steel</p>				

Brought Forward		R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>		
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>		
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>		
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	1.23
<p><u>SUNDRY STEELWORK</u></p>		
<p><u>Sundry Steelwork</u></p>		
2	Cleats, plates, gussets, connectors, etc	0.22
<p>Carried Forward to Summary of Section No. 3</p> <p>Section No. 3 Bill No. 3 Structural Steel</p>		R

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 4</u>				
	<u>METALWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>GALVANISED STEEL BENCHES</u>				
	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u>				
1	Back-to-back sides bench 1800mm long with straight leg	No	4		
	<u>BUDGETARY ALLOWANCES</u>				
	<u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u>				
2	Allow an amount of R 108,000.00 for reinforced glass with metal frames (waiting area viewing panels) amount to be utilized at the discretion of the Principal Agent.		Item		108,000.00
	Carried Forward to Summary of Section No. 3			R	
	Section No. 3				
	Bill No. 4				
	Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 6</u> <u>PAINTWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u> <u>ON METAL SURFACES</u> <u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Interguard 269 galvanizing primer and two coats Interthane 990 recoatable polyurethane</u>				
1	On structural steel members	m2	83		
	<p style="text-align: right;">Carried Forward to Summary of Section No. 3</p> <p>Section No. 3 Bill No. 6 Paintworks</p>			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Bill No	SECTION SUMMARY - Waiting Area (B)		Page No	Amount	
1	Alteration Works		94		
2	Roof Coverings		99		
3	Structrual Steel		102		
4	Metalwork		103		
5	Plumbing and Drainage		104		
6	Paintworks		105		
Section No. 3		Carried to Final Summary		R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4</u>			
	<u>BILL NO. 1</u>			
	<u>ALTERATIONS</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>REMOVAL OF EXISTING WORK</u>			
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>			
1	Carefully take out vandalised metal roof sheeting in patches including screws, sislotion, and preparing exsiting steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	144	
2	Carefully take out and remove damaged steel purlins	m	82	
	<u>Carefully take out and remove gutters and downpipes etc.</u>			
3	Existing metal box gutter	m	27	
4	Existing 110mm uPVC downpipes including outlet, bends & shoe	m	40	
	<u>Carefully take out and remove gutters and downpipes etc.</u>			
5	Existing barge flashing, girth 550mm	m	97	
	<u>Take out and remove doors, windows etc from brickwork to remain including making good cement plaster on both sides</u>			
6	Steel single door and steel frame 813 x 2032mm high overall	No	4	
	Carried Forward			
	Section No. 4 Bill No. 1 Alteration Works		R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Taking out/off and removing sundry metalwork</u>			
7	Existing steel balustrades fixed on steel frames including preparing surfaces to receive new (new elsewhere measured)	No 45	
<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
8	Pressure clean down facebrick walls and seal with an approved sealer	m2 181	
9	Remove damaged face bricks and replace with new to match existing	m2 14	
10	Making good to defects in concrete floors with "Sika" or other equally approved	m2 22	
11	Prepare existing floor surfaces to receive new epoxy paint (new epoxy elsewhere measured) including patching damages in patches with ABE Durarep FR or similar approved.	m2 16	
<u>SUNDRIES</u>			
<u>Tarmacdam</u>			
<u>Bituminous premix road surfacing</u>			
12	Prime and lay 40mm thick 40/50 pen. Bitumen 9.5mm Stone, in patches	m2 44	
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 1			
Alteration Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 2</u>			
	<u>ROOF COVERING</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>SHEETING</u>			
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.			
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>			
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.			
	<u>FIXING SAFLOK</u>			
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-			
	Carried Forward		R	
	Section No. 4 Bill No. 2 Roof Covering			

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 2 Roof Covering</p>	<p style="text-align: center;">R</p> <hr/> <p style="text-align: center;">R</p>
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<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 2 Roof Covering</p>	<p style="text-align: center;">R</p> <hr/> <p style="text-align: center;">R</p>
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	<p style="text-align: center;">Brought Forward</p> <p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>		R	
1	Roof covering with pitch not exceeding 25 degrees	m2	144	
	<p style="text-align: center;">Carried Forward</p> <p>Section No. 4 Bill No. 2 Roof Covering</p>		R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

[illegible]

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 3</u></p> <p><u>STRUCTURAL STEEL</u></p> <p><u>PREAMBLES</u></p> <p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>			
<p>Carried Forward</p>			<p>R</p>
<p>Section No. 4 Bill No. 3 Structural Steel</p>			

<p style="text-align: center;">Brought Forward</p> <p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 4 Bill No. 3 Structural Steel</p>		R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>Marking steelwork</u>			
Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.			
<u>Testing of welds</u>			
10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.			
Fabricate, supply, deliver and erect including shop and site painting as described.			
<u>HOT DIPPED GALVANISED PURLINS</u>			
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	t	1.53
<u>SUNDRY STEELWORK</u>			
<u>Sundry Steelwork</u>			
2	Cleats, plates, gussets, connectors, etc	t	0.15
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 3			
Structural Steel			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Quantity	Rate	Amount
<u>BILL NO. 4</u>			
<u>METALWORK</u>			
<u>PREAMBLES</u>			
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>			
<u>1.2mm Double rebated frames suitable for one brick wall</u>			
1	Frame for door 813 x 2032mm high	No 4	
<u>GALVANISED STEEL GATES, SCREENS, ETC</u>			
<u>Hot dipped galvanised steel gates</u>			
2	Single gate size 900 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fame 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate	No 4	
3	Double gate size 2600 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fame 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate	No 4	
<u>GALVANISED MILD STEEL BALUSTRADES</u>			
Carried Forward			R
Section No. 4 Bill No. 4 Metalwork			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward		R
<u>Standard ball type steel balustrades</u>		
4	Standard ball type handrail and post fixed on 100 x 100 x 8mm thick base plate with 4 No. M10 chemical anchors fixed to concrete slab. Fischer M10 (8.8) galvanised H.D. anchor studs (with embedment length 220mm) with fischer FIS-V-360 chemical mortar or similar approved chemical anchors with 'ETA' (european technical approval)	m 45
Carried Forward to Summary of Section No. 4		R
Section No. 4		
Bill No. 4		
Metalwork		

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Quantity	Rate	Amount
<u>BILL NO. 5</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>PREAMBLES</u>				
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
<u>RAINWATER DISPOSAL</u>				
<u>1.6mm Gauge aluminium gutter box</u>				
1	250 x 200mm High purpose made box gutter	m	27	
2	Extra over gutter box for stop end	No	8	
3	Extra over gutter box for 110mm outlet	No	4	
<u>"Marley" or other equally approved uPVC downpipes</u>				
4	110mm Diameter rainwater pipe	m	40	
5	Extra over 110mm rainwater pipe for bend	No	16	
6	Extra over 110mm rainwater pipe for shoe	No	4	
Carried Forward to Summary of Section No. 4				
Section No. 4				
Bill No. 5				
Plumbing and Drainage				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>PAINTWORK</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u>			
	<u>ON EXISTING CONCRETE FLOOR SURFACES</u>			
	<u>Prepare floors including all necessary degreasing, patching, grinding and sanding, prime with 'Flowshield Primer' and apply 4-6mm thick self levelling 'Flowshield epoxy</u>			
1	On floor surfaces	m2	16	
	<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>			
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved alkali resistant primer and two coats "Micatex" emulsion paint for exterior use</u>			
2	On grill blocks	m2	8	
	<u>ON METAL SURFACES</u>			
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved one coat red oxide primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>			
3	On balustrades	m2	332	
4	On steel wall balustrades	m2	325	
	Carried Forward		R	
	Section No. 4 Bill No. 6 Paintworks			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
	<u>Prepare, degrease and sand down existing surfaces and apply "Plascon" or other approved alkyd based zinc phosphate primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on steel</u>		
5	On structural steel members	m2	706
	<u>PAINTWORK, ETC TO NEW SURFACES</u>		
	<u>ON METAL SURFACES</u>		
	<u>One coat calcium plumbate primer on:</u>		
6	Backs of galvanised steel door frames before fixing	m2	8
	<u>"Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>		
7	On door frames	m2	8
	<u>"Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>		
8	On balustrades	m2	90
	<u>ON PREMIX SURFACES</u>		
	<u>100mm Yellow luminous painted safety line on concrete surfaces as per Prasa specification</u>		
9	100mm Yellow solid line	m	245
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 6			
Paintworks			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

SECTION SUMMARY - Pedestrian Bridge (C & F)		Page No	Amount	
Bill No				
1	Alteration Works	108		
2	Roof Covering	113		
3	Structural Steel	116		
4	Metalwork	118		
5	Plumbing and Drainage	119		
6	Paintworks	121		
Carried to Final Summary			R	
Section No. 4				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 5</u>				
	<u>BILL NO. 1</u>				
	<u>ALTERATIONS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
1	Carefully take out vandalised metal roof sheeting in patches including screws, sisalation, and preparing existing steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	64		
2	Carefully take out and remove damaged steel purlins	m	56		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
3	Existing metal box gutter	m	9		
4	Existing 110mm metal downpipes including outlet, bends & shoe	m	6		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
5	Existing barge flashing, girth 550mm	m	32		
	<u>Saw cut, breaking up and removing premix including reducing ground by 150mm deep</u>				
6	Platforms	m2	64		
	Carried Forward to Summary of Section No. 5			R	
	Section No. 5 Bill No. 1 Alteration Works				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 2</u>				
	<u>ROOF COVERING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>SHEETING</u>				
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.				
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.				
	<u>FIXING SAFLOK</u>				
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-				
	Carried Forward				
	Section No. 5 Bill No. 2 Roof Coverings			R	

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 5 Bill No. 2 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 5 Bill No. 2 Roof Coverings</p>			R	
			R	

	Brought Forward			R
	<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	64	
	Carried Forward			R
	<p>Section No. 5 Bill No. 2 Roof Coverings</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		Brought Forward			R
	<u>Sundries</u>				
2	Gutter flashing 300mm girth	m	9		
3	Barge flashing 660mm girth	m	32		
Carried Forward to Summary of Section No. 5					R
Section No. 5 Bill No. 2 Roof Coverings					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<p><u>BILL NO. 3</u></p> <p><u>STRUCTURAL STEEL</u></p> <p><u>PREAMBLES</u></p> <p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
<p>Carried Forward</p>				<p>R</p>
<p>Section No. 5 Bill No. 3 Structural Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 5</p> <p>Bill No. 3</p> <p>Structrual Steel</p>				

Brought Forward			R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>			
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>			
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>			
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	t	1.83
<p><u>SUNDRY STEELWORK</u></p>			
<p><u>Sundry Steelwork</u></p>			
2	Cleats, plates, gussets, connectors, etc	t	0.18
<p>Carried Forward to Summary of Section No. 5</p> <p>Section No. 5 Bill No. 3 Structural Steel</p>			R

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 4</u>				
	<u>METALWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>GALVANISED STEEL BENCHES</u>				
	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u>				
1	Back-to-back sides bench 1800mm long with straight leg	No	4		
	<u>BUDGETARY ALLOWANCES</u>				
	<u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u>				
2	Allow an amount of R 108,000.00 for reinforced glass with metal frames (waiting area viewing panels) amount to be utilized at the discretion of the Principal Agent.		Item		108,000.00
	Carried Forward to Summary of Section No. 5			R	
	Section No. 5				
	Bill No. 4				
	Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 5				
	<u>PLUMBING AND DRAINAGE</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>RAINWATER DISPOSAL</u>				
	<u>1.6mm Gauge aluminium gutter box</u>				
1	250 x 200mm High purpose made box gutter	m	9		
2	Extra over gutter box for stop end	No	2		
3	Extra over gutter box for 110mm outlet	No	2		
	<u>"Marley" or other equally approved uPVC downpipes</u>				
4	110mm Diameter rainwater pipe	m	12		
5	Extra over 110mm rainwater pipe for bend	No	4		
6	Extra over 110mm rainwater pipe for shoe	No	2		
	Carried Forward to Summary of Section No. 5			R	
	Section No. 5 Bill No. 5 Plumbing and Drainage				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 6</u> <u>PAINTWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u> <u>ON METAL SURFACES</u> <u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Interguard 269 galvanizing primer and two coats Interthane 990 recoatable polyurethane</u>				
1	On structural steel members	m2	83		
	<p style="text-align: right;">Carried Forward to Summary of Section No. 5</p> <p>Section No. 5 Bill No. 6 Paintworks</p>			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

SECTION SUMMARY - Waiting Area (D)		Page No	Amount	
Bill No				
1	Alteration Works	123		
2	Roof Coverings	128		
3	Structrual Steel	131		
4	Metalwork	132		
5	Plumbing and Drainage	133		
6	Paintworks	134		
Carried to Final Summary			R	
Section No. 5				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 6</u>				
	<u>BILL NO. 1</u>				
	<u>ALTERATIONS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
1	Carefully take out vandalised metal roof sheeting in patches including screws, sislotion, and preparing exsiting steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	436		
2	Carefully take out and remove damaged steel purlins	m	244		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
3	Existing metal box gutter	m	122		
4	Existing 110mm metal downpipes including outlet, bends & shoe	m	25		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
5	Existing barge flashing, girth 550mm	m	136		
	<u>Take out and remove doors, windows etc from brickwork to remain including making good cement plaster on both sides</u>				
6	Timber single door and steel frame 813 x 2032mm high overall	No	18		
	Carried Forward			R	
	Section No. 6 Bill No. 1 Alteration Works				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
	<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc</u>			
7	Tiles to floors, including 30mm screeds	m2	82	
8	Tiles to walls	m2	365	
	<u>Take out and remove piping, sanitary fittings, etc., including disconnecting piping from fittings and make good floor and wall finishes</u>			
9	Vitreous china wash hand basin, including short lengths of piping, etc	No	11	
10	Vitreous china WC pan with cistern, including short lengths of piping, etc	No	13	
11	Vitreous china urinal, including short lengths of piping, etc	No	2	
12	Floor drain including short lengths of piping, etc.	No	4	
	<u>Taking out/off and removing glass and mirrors</u>			
13	Glass from steel windows, including cleaning out rebates and preparing for new glass	m2	4	
	<u>Taking out/off and removing sundry metalwork</u>			
14	Remove existing steel bench overall size 1830 x 500mm and comprises of 50mm diameter frames, 2 x 50mm diameter steel post and base plate bolted (four number of bolts) to concrete surfaces, base size 120 x 120mm, prepare and seal surfaces with epoxy grout to receive new (new elsewhere measured)	No	32	
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
15	Pressure clean down facebrick walls and seal with an approved sealer	m2	218	
16	Remove damaged face bricks and replace with new to match existing	m2	11	
Carried Forward				R
Section No. 6 Bill No. 1 Alteration Works				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 2</u>				
	<u>ROOF COVERING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>SHEETING</u>				
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.				
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.				
	<u>FIXING SAFLOK</u>				
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-				
	Carried Forward				
	Section No. 6 Bill No. 2 Roof Coverings			R	

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 6 Bill No. 2 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ol style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 6 Bill No. 2 Roof Coverings</p>			R	
			R	

Brought Forward				R
<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>				
1	Roof covering with pitch not exceeding 25 degrees	m2	436	
Carried Forward				R
<p>Section No. 6 Bill No. 2 Roof Coverings</p>				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		Brought Forward			R
	<u>Sundries</u>				
2	Gutter flashing 300mm girth	m	122		
3	Ridge flashing 550mm girth	m	61		
4	Barge flashing 660mm girth	m	136		
Carried Forward to Summary of Section No. 6					R
Section No. 6					
Bill No. 2					
Roof Coverings					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 3				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	FLUSH DOORS				
	Solid core flush doors with Sapele veneer covering on both sides and hard wood edging strips on vertical sides.				
1	44mm Door size 813 x 2032mm high hung to steel frames	No	10		
2	Extra over door 813 x 2032mm high overall for cutting and forming opening approximately 400 x 400mm high.	No	10		
	Semi-solid core flush doors with Sapele veneer covering on both sides and hard wood edging strips on vertical sides.				
3	44mm Door size 813 x 2032mm high hung to timber frames	No	8		
	FRAMED FRAMES ETC				
	Wrought meranti				
4	44 x 110mm Rebated linings, plugged for door size 813 x 2032mm high.	No	8		
	Carried Forward to Summary of Section No. 6			R	
	Section No. 6 Bill No. 3 Carpentry and Joinery				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 4</u>				
	<u>CEILINGS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUSPENDED CEILINGS</u>				
	<u>'OWA' or other equally approved 12.5mm Vinyl Faced Gypsum Ceiling Panels, face-covered with white embossed vinyl, size 1200 x 600mm, laid on fire rated Cliq system S3 exposed demountable suspension system including galvanised main tees, cross tees, etc., all suspended with galvanised hangers at centres not exceeding 1200mm and all installed to manufacturer's instructions.</u>				
1	Ceilings suspended not exceeding 1m below structural steel roof trusses	m2	82		
2	Extra over for 1200 x 600mm Opening in ceiling for light fittings	No	23		
3	Extra over for 40mm Diameter opening in ceiling panels for light fittings, fire detection, etc.	No	21		
4	Extra over for 100mm diameter opening in ceiling panels for extraction	No	16		
	<u>Shadowline, cornices, etc to ceilings</u>				
5	'OWAconstruct' or other equally approved pre-painted shadowline W-trim plugged at 200mm centres and all installed in accordance to the manufacturer's specification	m	135		
	Carried Forward to Summary of Section No. 6			R	
	Section No. 6				
	Bill No. 4				
	Ceilings				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
BILL NO. 5					
<u>IRONMONGERY</u>					
<u>PREAMBLES</u>					
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item					
<u>HINGES, ETC</u>					
<u>Manufactured by "Union" or other equally approved</u>					
1	102 x 75 x 3mm Stainless steel two ball bearing butt hinge (Code: 8352-100SB)	No	24		
<u>LOCKSETS, ETC</u>					
<u>Manufactured by "Dormakaba" or other equally approved</u>					
2	Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. (D037D SS)	No	8		
3	Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm. (D036S SS)	No	10		
4	Bathroom Deadlock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm. (D032D SS)	No	10		
5	43mm five pin Euro-profile Single Cylinder Grand Master Keyed (DSC104301 GMK)	No	8		
6	Round Cylinder escutcheon (DCE-002 S.S)	No	8		
<u>HANDLES</u>					
				R	
Carried Forward					
Section No. 6 Bill No. 5 Ironmongery					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Manufactured by "Dormakaba" or other equally approved</u>			
7	300 x 30mm Straight Tubular Pull Handle BT (DPH210 BT)	No	8	
8	325 x 25mm Straight Tubular Pull Handle Flange Fixing (DPH301B)	No	4	
	<u>PUSH PLATES AND KICK PLATES</u>			
	<u>Manufactured by "Dormakaba" or other equally approved</u>			
9	150 x 300 x 1.2mm thick Grade 430 stainless steel plate. Stainless Steel Plate to have 6 countersunk holes for screw fixing. (DPP-430-BL-SF 150X300)	No	8	
10	300 x (width of door) x 1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door) (DKP-430-SF 300)	No	20	
	<u>LETTERS, NAMEPLATES, ETC</u>			
	<u>Manufactured by "Dormakaba" or other equally approved</u>			
11	150 x 150mm MALE sign (Code: DSS-130 M)	No	4	
12	150 x 150mm FEMALE sign (Code: DSS-131 F)	No	4	
13	150 x 150mm PARAPLEGIC sign	No	2	
	<u>NON-STATUTORY SIGNAGE (PRASA SPECIFICATION)</u>			
	<u>Internal Signage: Digitally printed</u>			
14	Wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.2, page 11 of 12 of Prasa Specification, for full details.	No	8	
15	Door and wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J2.1, page 11 of 12 of Prasa Specification, for full details.	No	8	
	Carried Forward			R
	Section No. 6 Bill No. 5 Ironmongery			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward					R
<u>DOOR CLOSURE</u>					
<u>Manufactured by "Dormakaba" or other equally approved</u>					
16	NON HOLD OPEN Cam action slide channel door closer. Max door width 950mm. Closing Force EN 3. Hydraulic speed control. Pull-side door leaf fixing (Standard), Push-side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120, MM/IMM 240. Certified manufacturer to ISO 9001 (TS91B - SL)	No	8		
17	EN 2-4 Parallel Arm DELAYED ACTION Door Closer. Push Side Fixing (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100 (TS73V PA DC - PAB - SL)	No	2		
<u>BATHROOM FITTINGS</u>					
18	"Franke Rodan RODX672" or other equally approved 0,8mm thick satin finished stainless steel double toilet roll holder with spindle system (Code: 359987), size 144 x 138 x 301mm high for 2 rolls maximum 120mm diameter with cylinder lock with standard Franke Key, plugged and screwed to the wall with stainless steel screws.	No	13		
19	"XLerator 2.5Kw" or other equally approved 270W x 240H x 200Dmm Automatic Electric Stainless Steel Hand Dryer - CLX2500 or other equally approved satin finish stainless steel casing	No	10		
<u>"Chilli-B" or other equally approved:</u>					
20	Soap dispenser (code: P-SDM-650) bolted to walls including all necessary fittings	No	10		
<u>PARAPLEGIC FITTINGS</u>					
<u>Manufactured by "Dormakaba" or other equally approved</u>					
21	300x300x300mm Side Grab Rail (DGR-SS-152)	No	2		
22	800x206mm Cistern Back Rail (DGR-SS-150)	No	2		
Carried Forward					R
Section No. 6 Bill No. 5 Ironmongery					

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
<u>SUNDRIES</u>				
<u>Manufactured by "Dormakaba" or other equally approved</u>				
23	Floor Mounted Door Stop (DDS-SS-017)	No	10	
24	Hat and Coat Hook with rubber buffer (DHC-SS-031B)	No	8	
Carried Forward to Summary of Section No. 6				R
Section No. 6				
Bill No. 5				
Ironmongery				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 6</u>				
<u>STRUCTURAL STEEL</u>				
<u>PREAMBLES</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
Carried Forward				R
<p>Section No. 6 Bill No. 6 Structrual Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 6</p> <p>Bill No. 6</p> <p>Structrual Steel</p>				

Brought Forward			R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>			
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>			
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>			
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	t	0.98
<p><u>SUNDRY STEELWORK</u></p>			
<p><u>Sundry Steelwork</u></p>			
2	Cleats, plates, gussets, connectors, etc	t	0.30
<p>Carried Forward to Summary of Section No. 6</p> <p>Section No. 6 Bill No. 6 Structrual Steel</p>			R

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 7</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>				
<u>1.2mm Double rebated frames suitable for one brick wall</u>				
1	No	18		
Frame for door 813 x 2032mm high				
<u>GALVANISED STEEL GATES, SCREENS, ETC</u>				
<u>Hot dipped galvanised steel gates</u>				
2	No	10		
Single gate size 900 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fame 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate				
<u>ANODISED ALUMINIUM LOUVRE UNITS</u>				
<u>'Trox' or other equally approved natural anodised louvre units screwed into wooden door</u>				
3	No	10		
Type AGS-T size 400mm wide x 400mm high				
<u>GALVANISED STEEL BENCHES</u>				
Carried Forward				R
Section No. 6 Bill No. 7 Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward					R
4	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u> Back-to-back sides bench 1800mm long with straight leg	No	4		
Carried Forward to Summary of Section No. 6 Section No. 6 Bill No. 7 Metalwork					R

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 9</u>				
	<u>TILING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Fixing</u>				
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.				
	Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for tiling key-coat.				
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the Tal Professional range of products as recommended by the manufacturer.				
	<u>WALL TILING</u>				
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE20 A 600AH) with 3mm grouting fixed with 'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
1	On walls (Black)	m2	183		
2	On narrow widths	m2	13		
	Carried Forward			R	
	Section No. 6 Bill No. 9 Tiling				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE SPA 6100 3x6 AH) with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
3	On walls (Ivory)	m2	183	
4	On narrow widths	m2	13	
	<u>FLOOR TILING</u>			
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6879N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
5	On floors	m2	66	
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6876N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
6	On floors	m2	16	
	<u>SUNDRIES</u>			
	<u>"Genesis" or other equally approved edge trims:</u>			
7	27 x 10 x 10mm aluminium square edge trim (Code: TDF 104.81)	m	149	
8	21 x 10mm aluminium straight edge trim (Code: ESA 100.80)	m	9	
	<u>Polysulphide soft joint or equally approved at 3.0m intervals both ways as per supplier instructions</u>			
9	5 x 10mm Joints in floor tiles	m	55	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 9			
	Tiling			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 10</u>				
	<u>PLUMBING AND DRAINAGE</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>RAINWATER DISPOSAL</u>				
	<u>1.6mm Gauge aluminium gutter box</u>				
1	250 x 200mm High purpose made box gutter	m	122		
2	Extra over gutter box for stop end	No	4		
3	Extra over gutter box for 110mm outlet	No	6		
	<u>"Marley" or other equally approved uPVC downpipes</u>				
4	110mm Diameter rainwater pipe	m	19		
5	Extra over 110mm rainwater pipe for bend	No	12		
6	Extra over 110mm rainwater pipe for shoe	No	6		
	<u>SANITARY FITTINGS</u>				
	<u>WC</u>				
7	"Vaal Sanitaryware" or other equally approved vitreous china Parktown 90 degree outlet top inlet or back inlet flushvalve (code: 431600) and double flap plastic seat	No	11		
8	"Grohe" or other equally approved 25mm diameter chrome flush valve for wc (code: 37609) for concealed installation with push button actuator, 1.2 - 5.0 bar flow pressure, flow rate adjustment, including 25mm supply pipe, stop valve, flush pipe and 300mm extension pipe to wc.	No	11		
	Carried Forward			R	
	Section No. 6 Bill No. 10 Plumbing and Drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Wash Hand Basin (Public Ablutions)</u>				
9	"Vaal Sanitaryware" or other equally approved Bantam vitreous China cloakroom basin colour White (Code: 7030), size 455 x 290mm with one taphole (LHS) including integrated overflow and chain stay, basin bolted to wall with two 10mm bolts (Code: 8448Z0) and sealed with silicone sealant where basin meets wall.	No	9	
10	"Cobra" or other equally approved self-closing push button metering spout, wall type with non-hold open feature, flow time 1 - 20 secs.	No	9	
11	GH angle valve bau 15x15mm	No	9	
12	303-32 Basin waste	No	9	
13	ISM Gio bottle trap CP 32mm	No	9	
<u>Urinals</u>				
14	"Vaal Sanitaryware" or other equally approved 565 x 275 x 310mm sweetpea white vitreous china wall mounted back inlet urinal (code: 705127) including 38mm chromium plated domical grating (code: 8787z0) and chromium plated back inlet spreader (code: 7054z2), flush valve, flush pipe and fittings (by others), fixed on and including two hanger brackets (code: 8127z0).	No	2	
15	"Walcro" or other equally approved 15mm Ø BSP built-in sleeve, DZR brass urinal flush valve (code: 155UW) with internal flow control, strainer and no-hold feature for single bowl urinal.	No	2	
<u>WC (Paraplegic)</u>				
16	"Whyte House" or other equally approved paraplegic WC (code: 025134) with back inlet flush valve & double flap plastic seat.	No	2	
Carried Forward				R
Section No. 6 Bill No. 10 Plumbing and Drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
17	"Grohe" or other equally approved 25mm diameter chrome flush valve for wc (code: 37609) for concealed installation with push button actuator, 1.2 - 5.0 bar flow pressure, flow rate adjustment, including 25mm supply pipe, stop valve, flush pipe and 300mm extension pipe to wc.	No	2		
	<u>Wash Hand Basin (Paraplegic)</u>				
18	"Vaal Sanitaryware" or other equally approved hibiscus vitreous china lavatory basin colour white (code: 7023), size 510 x 405mm with one tap hole including integrated overflow and chain stay hole bolted to wall with two x 10mm bolts (code: 8448Z0) and including universal half pedestal with hanger springs (code: 715221) and sealed with silicone sealant where basin meets wall.	No	2		
19	"Cobra" or other equally approved medical elbow action pillar tap with high waist, chrome finish, manufactured in accordance with SANS 226 Type 2.	No	2		
20	GH angle valve 15x10mm	No	2		
21	303-32 Basin waste	No	2		
22	ISM Gio bottle trap CP 32mm	No	2		
	<u>Floor Drains</u>				
23	"Seaqual" or similar approved floor drain size 250x250 x 75mm deep with grating to suite and with 100mm diameter outlet and set in position and installed as per manufacturer's instructions	No	4		
	<u>TAPS, VALVES, ETC.</u>				
	Taps, valves, etc. jointed to copper pipes are to include brass connectors, adaptors etc. Installation and fixings to be as per manufacturers specifications and SANS 1808-9 compliant.				
24	15mm Ball-O- stop valves	No	4		
25	22mm Ball-O- stop valves	No	6		
	Carried Forward			R	
	Section No. 6 Bill No. 10 Plumbing and Drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>SANITARY PLUMBING</u>			
<u>uPVC pipes cast into concrete slabs, fixed to soffit and walls, or chased into walls, chased into concrete, etc. in accordance with manufacturers specifications</u>			
26	50mm Pipes	m	51
27	110mm Pipes	m	52
<u>Extra over uPVC pipes for:</u>			
28	50mm Bend	No	45
29	50mm Access bend	No	23
30	50mm Junction	No	8
31	50mm Access junction	No	4
32	50mm Coupling	No	15
33	110mm Bend	No	26
34	110mm Access bend	No	13
35	110mm Access junction	No	7
36	110 x 50mm Access junction	No	8
37	110mm Pan connector	No	11
38	110mm Two way vent valve	No	4
39	110mm Coupling	No	13
<u>DOMESTIC WATER SUPPLIES</u>			
<u>Class 1 copper pipes fixed to soffit and walls, or chased into walls, chased into concrete, etc. in accordance with manufacturers specifications:</u>			
All piping embedded into concrete or chased into walls to be twice wrapped in strong approved building paper.			
Carried Forward			R
Section No. 6 Bill No. 10 Plumbing and Drainage			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	Rates for surface mounted copper pipe shall be deemed to include all fixtures and fittings for pipes fixed to walls, in chases, and in ceilings.			
40	15mm Pipes	m	45	
41	22mm Pipes	m	79	
	<u>Extra over copper pipes for capillary fittings:</u>			
42	15mm Bend	No	39	
43	22mm Bend	No	51	
44	22 x 15mm Bend	No	7	
45	22mm Tees	No	19	
46	22 x 15mm Tees	No	7	
	<u>Extra over copper pipes for brass compression fittings:</u>			
47	15mm Flexible service pipe 300mm girth	No	13	
48	15mm Wallplate elbow	No	13	
49	22mm Wallplate elbow	No	13	
	<u>TESTING</u>			
50	Allow for testing the whole of the Stormwater drainage, Sewer drainage, Plumbing, Water and Fire supplies and all fittings to the satisfaction of the Architect, Engineer and Local Authorities. All defective work is to be taken out and replaced at the contractor's expense and the whole re-tested until acceptable		Item	
	<u>AS-BUILT DRAWINGS</u>			
51	Provide a full set of as-built drawings on completion of the installation		Item	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 10			
	Plumbing and Drainage			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 11				
	GLAZING				
	PREAMBLES				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	GLAZING TO STEEL WITH PUTTY				
	6.38mm Shutter proof glass				
1	Panes exceeding 0,5m2 and not exceeding 2,0m2	m2	4		
	MIRRORS				
	<u>Mirrors shall be silver float glass with polished edges all round and holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>				
2	6mm Mirror size 600 x 750mm, four times holed and fixed to plastered wall	No	13		
	Carried Forward to Summary of Section No. 6			R	
	Section No. 6 Bill No. 11 Glazing				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 12</u>				
	<u>PAINTWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u>				
	<u>ON METAL SURFACES</u>				
	<u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Interguard 269 galvanizing primer and two coats Interthane 990 recoatable polyurethane</u>				
1	On structural steel members	m2	436		
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved one coat red oxide primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>				
2	On window frames	m2	8		
3	On burglar guard mesh screen	m2	8		
	<u>PAINTWORK, ETC TO NEW SURFACES</u>				
	<u>ON METAL SURFACES</u>				
	<u>One coat calcium plumbate primer on:</u>				
4	Backs of galvanised steel door frames before fixing	m2	36		
	Carried Forward			R	
	Section No. 6 Bill No. 12 Paintworks				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
	<u>"Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>		
5	On door frames	m2	36
	<u>ON WOOD SURFACES</u>		
	<u>"Plascon" or other equally approved primer, one coat alkyd based universal undercoat and two coats professional gloss enamel paint</u>		
6	On doors	m2	70
Carried Forward to Summary of Section No. 6			R
Section No. 6 Bill No. 12 Paintworks			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

SECTION SUMMARY - Waiting Area and Ablutions (E)		Page No	Amount	
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Carried to Final Summary			R	
Section No. 6				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 7</u>				
	<u>BILL NO. 1</u>				
	<u>ALTERATIONS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
1	Carefully take out vandalised metal roof sheeting in patches including screws, sislotion, and preparing existing steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	64		
2	Carefully take out and remove damaged steel purlins	m	56		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
3	Existing metal box gutter	m	9		
4	Existing 110mm metal downpipes including outlet, bends & shoe	m	6		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
5	Existing barge flashing, girth 550mm	m	32		
	Carried Forward to Summary of Section No. 7			R	
	Section No. 7				
	Bill No. 1				
	Alteration Works				

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 2</u>				
<u>ROOF COVERING</u>				
<u>PREAMBLES</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>SHEETING</u>				
<p>Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.</p>				
<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
<p>ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.</p>				
<u>FIXING SAFLOK</u>				
<p>The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-</p>				
Carried Forward			R	
<p>Section No. 7 Bill No. 2 Roof Coverings</p>				

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 7 Bill No. 2 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 7 Bill No. 2 Roof Coverings</p>			R	
			R	

	Brought Forward			R
	<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	64	
	Carried Forward			R
	<p>Section No. 7 Bill No. 2 Roof Coverings</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		Brought Forward			R
	<u>Sundries</u>				
2	Gutter flashing 300mm girth	m	9		
3	Barge flashing 660mm girth	m	32		
Carried Forward to Summary of Section No. 7					R
Section No. 7 Bill No. 2 Roof Coverings					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 3</u>				
<u>STRUCTURAL STEEL</u>				
<u>PREAMBLES</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
Carried Forward				R
<p>Section No. 7 Bill No. 3 Structrual Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 7</p> <p>Bill No. 3</p> <p>Structrual Steel</p>				

Brought Forward		R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>		
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>		
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>		
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	1.83
<p><u>SUNDRY STEELWORK</u></p>		
<p><u>Sundry Steelwork</u></p>		
2	Cleats, plates, gussets, connectors, etc	0.18
<p>Carried Forward to Summary of Section No. 7</p> <p>Section No. 7 Bill No. 3 Structural Steel</p>		R

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 4</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>				
<u>1.2mm Double rebated frames suitable for one brick wall</u>				
1	No	4		
Frame for door 813 x 2032mm high				
<u>GALVANISED STEEL GATES, SCREENS, ETC</u>				
<u>Hot dipped galvanised steel gates</u>				
2	No	4		
Single gate size 900 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fane 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate				
3	No	4		
Double gate size 2600 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fane 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate				
<u>GALVANISED MILD STEEL BALUSTRADES</u>				
Carried Forward				R
Section No. 7 Bill No. 4 Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

[illegible]

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 6</u> <u>PAINTWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u> <u>ON METAL SURFACES</u> <u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Interguard 269 galvanizing primer and two coats Interthane 990 recoatable polyurethane</u>				
1	On structural steel members	m2	83		
	<p style="text-align: right;">Carried Forward to Summary of Section No. 7</p> <p>Section No. 7 Bill No. 6 Paintworks</p>			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 8</u>				
	<u>BILL NO. 1</u>				
	<u>ALTERATIONS</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
1	Brick building 10200 x 4200 x 2800mm high formed of clay brick walls, metal door frames, timber doors,, electrical to be disconnected, existing sanwares piping to be disconnected, floor and wall tiles, concrete floors, grubbing up foundations, etc. and level off area.	No	1		
2	Brick building 9400 x 4200 x 2800mm high formed of clay brick walls, metal door frames, timber doors,, electrical to be disconnected, existing sanwares piping to be disconnected, floor and wall tiles, concrete floors, grubbing up foundations, etc. and level off area.	No	1		
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
3	Carefully take out vandalised metal roof sheeting in patches including screws, sislotion, and preparing exsiting steel purlins to receive new sheeting (new sheeting elsewhere measured)	m2	436		
4	Carefully take out and remove damaged steel purlins	m	244		
	<u>Carefully take out and remove gutters and downpipes etc.</u>				
5	Existing metal box gutter	m	122		
	Carried Forward			R	
	Section No. 8 Bill No. 1 Alteration Works				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
6	Existing 110mm metal downpipes including outlet, bends & shoe	m	25
<u>Carefully take out and remove gutters and downpipes etc.</u>			
7	Existing barge flashing, girth 550mm	m	136
<u>Breaking down and removing brickwork, etc</u>			
8	One brick walls	m2	46
Carried Forward to Summary of Section No. 8 Section No. 8 Bill No. 1 Alteration Works			R

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 2</u>				
	<u>ROOF COVERING</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>SHEETING</u>				
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.				
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>				
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.				
	<u>FIXING SAFLOK</u>				
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-				
	Carried Forward				
	Section No. 8 Bill No. 2 Roof Coverings			R	

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 8 Bill No. 2 Roof Coverings</p>			R	
			R	

<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ul style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 8 Bill No. 2 Roof Coverings</p>			R	
			R	

	Brought Forward			R
	<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturers recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	436	
	Carried Forward			R
	<p>Section No. 8 Bill No. 2 Roof Coverings</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		Brought Forward			R
	<u>Sundries</u>				
2	Gutter flashing 300mm girth	m	122		
3	Ridge flashing 550mm girth	m	61		
4	Barge flashing 660mm girth	m	136		
Carried Forward to Summary of Section No. 8					R
Section No. 8					
Bill No. 2					
Roof Coverings					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 3</u>				
<u>STRUCTURAL STEEL</u>				
<u>PREAMBLES</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.</p>				
Carried Forward				R
<p>Section No. 8 Bill No. 3 Structrual Steel</p>				

Brought Forward			R	
<p><u>Corrosion Protection</u></p> <p>All steelwork</p> <p>a) Abrasive blast to Sa 2.5</p> <p>b) Galvanize to SABS 763 (Heavy Duty)</p> <p>c) Clean with Galvanized iron cleaner, treat galvanizing in such a way so that paint may be applied over it</p> <p>d) Apply 1 coat galvanizing primer - Interguard 269 or equally</p> <p>e) Apply 2No. Coats recoatable polyurethane - Interthane 900 or equal . Colour to Architect's specification.</p> <p>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted, and is deemed included. Only chemical anchor bolts are to be measured as a measurable item.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>				
Carried Forward			R	
<p>Section No. 8</p> <p>Bill No. 3</p> <p>Structrual Steel</p>				

Brought Forward			R
<p><u>Marking steelwork</u></p> <p>Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer's test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.</p>			
<p><u>Testing of welds</u></p> <p>10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.</p> <p>Fabricate, supply, deliver and erect including shop and site painting as described.</p>			
<p><u>HOT DIPPED GALVANISED PURLINS</u></p>			
1	150 x 75 x 20 x 3.5mm Cold rolled lipped channels	t	1.98
<p><u>SUNDRY STEELWORK</u></p>			
<p><u>Sundry Steelwork</u></p>			
2	Cleats, plates, gussets, connectors, etc	t	0.20
<p>Carried Forward to Summary of Section No. 8</p> <p>Section No. 8 Bill No. 3 Structrual Steel</p>			R

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 4</u>				
	<u>METALWORK</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>GALVANISED STEEL BENCHES</u>				
	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u>				
1	Back-to-back sides bench 1800mm long with straight leg	No	6		
	<u>BUDGETARY ALLOWANCES</u>				
	<u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u>				
2	Allow an amount of R 108,000.00 for reinforced glass with metal frames (waiting area viewing panels) amount to be utilized at the discretion of the Principal Agent.		Item		108,000.00
	Carried Forward to Summary of Section No. 8			R	
	Section No. 8				
	Bill No. 4				
	Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	BILL NO. 5				
	<u>PLUMBING AND DRAINAGE</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>RAINWATER DISPOSAL</u>				
	<u>1.6mm Gauge aluminium gutter box</u>				
1	250 x 200mm High purpose made box gutter	m	122		
2	Extra over gutter box for stop end	No	4		
3	Extra over gutter box for 110mm outlet	No	6		
	<u>"Marley" or other equally approved uPVC downpipes</u>				
4	110mm Diameter rainwater pipe	m	19		
5	Extra over 110mm rainwater pipe for bend	No	12		
6	Extra over 110mm rainwater pipe for shoe	No	6		
	Carried Forward to Summary of Section No. 8			R	
	Section No. 8 Bill No. 5 Plumbing and Drainage				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 6</u> <u>PAINTWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u> <u>ON METAL SURFACES</u> <u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Interguard 269 galvanizing primer and two coats Interthane 990 recoatable polyurethane</u>				
1	On structural steel members	m2	436		
	<p style="text-align: right;">Carried Forward to Summary of Section No. 8</p> <p>Section No. 8 Bill No. 6 Paintworks</p>			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 9</u>			
	<u>BILL NO. 1</u>			
	<u>ALTERATIONS</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>REMOVAL OF EXISTING WORK</u>			
1	Carefully disconnect and remove electrical cables including light fittings, etc.	m2	50	
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>			
2	Carefully take out and remove existing slate roof tiles including sislotion, timber battens, etc.	m2	51	
3	Carefully take out and remove existing side cladding slate roof tiles including sislotion, timber battens, etc.	m2	9	
4	Carefully take down and removed damaged roof trusses	m2	50	
5	Gypsum plasterboard ceilings including cornices, timber brandering, etc.	m2	50	
	<u>Carefully take out and remove gutters and downpipes etc.</u>			
6	Existing metal box gutter	m	9	
7	Existing 110mm uPVC downpipes including outlet, bends & shoe	m	7	
	Carried Forward			
	Section No. 9 Bill No. 1 Alterations		R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Take out and remove doors, windows etc from brickwork to remain including making good cement plaster on both sides</u>			
8	Timber single door and steel frame 813 x 2032mm high overall	No	3	
9	Steel window size 600 x 900mm high	No	1	
10	Steel window size 4225 x 1275mm high	No	2	
	<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc</u>			
11	Tiles to floors, including 30mm screeds	m2	50	
12	75mm High tiles skirting to walls	m	44	
13	Tiles to walls	m2	21	
	<u>Take out and remove piping, sanitary fittings, etc., including disconnecting piping from fittings and make good floor and wall finishes</u>			
14	Vitreous china wash hand basin, including short lengths of piping, etc	No	1	
15	Vitreous china WC pan with cistern, including short lengths of piping, etc	No	1	
16	Stainless steel sink and drainer including stainless steel cupboard 1650 x 600 x 900mm high and short lengths of piping, etc.	No	1	
17	10 Litre Hydroboil including short lengths of piping, etc.	No	1	
	<u>Taking out and removing sundry joinery work, fittings, etc</u>			
18	Timber kitchen floor cupboard 1800 x 600 x 900mm high including work top	No	1	
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
19	Pressure clean down external facebrick walls and seal with an approved sealer	m2	132	
	Carried Forward			R
Section No. 9 Bill No. 1 Alterations				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
20	Remove damaged face bricks and replace with new to match existing	m2	7		
21	Making good to defects in concrete floors with "Sika" or other equally approved	m2	5		
Carried Forward to Summary of Section No. 9				R	
Section No. 9					
Bill No. 1					
Alterations					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 2</u>			
	<u>ROOF COVERING</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>SHEETING</u>			
	Safintra or other similar approved 0,50mm thick SAFLOK 700 Colorplus AZ150 interlocking roof sheeting fixed to timber internal purlins at 2000mm, and ridge/eaves purlins at 1700mm centres using SAFLOK 700 clips which must be screw fixed to timber purlins with Fixtiteor Safintra approved wafer head self-tapping screws. The sheeting will be a double interlocking concealed fix SAFLOK 700 profile as manufactured by Safintra Roofing, roll formed in continuous lengths from certified G550 steel or aluminium 3004 H14. The profile shall be roll formed with 4 ribs and centres not exceeding 233mm and a cover width not exceeding 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum sheet depth will be 41mm. Two stiffening ribs are incorporated in each pan.			
	<u>MATERIAL AND FINISH FOR SAFLOK ROOF SHEETING</u>			
	ZincAL AZ150 coated steel G550 with a ColorPLUS colour coated finish to one side, colour (sample of colour to be approved on site) with a Cool Grey backing coat.			
	<u>FIXING SAFLOK</u>			
	The Saflok sheets shall be fixed to every purlin by means of patented SAFLOK 700 clips having spurs which will securely hold the sheets in position and lock-			
	Carried Forward		R	
	Section No. 9 Bill No. 2 Roof Covering			

<p style="text-align: right;">Brought Forward</p> <p>in the sidelap and both centre ribs. The SAFLOK 700 clips shall be manufactured from Galvanized steel and shall be fixed with the appropriate self-drilling/tapping screws to timber or steel purlins (selection from installation manual) OR with ZAP no. 10x45mm Waferhead screws type 17 to timber purlins.</p> <p><u>SAFLOK FLASHINGS</u></p> <p>Flashings specifications shall be to the Safintra standards and fixed to the sheeting with S10 brackets or, Sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from Global Roofing Solutions.</p> <p><u>SAFETY</u></p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p><u>INSTALLATION</u></p> <p>Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, should be replaced. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surfaces in order to prevent steel particles from penetrating coated surfaces.</p> <p><u>HANDLING AND STORAGE</u></p> <p>The contractor shall ensure that all materials used on site for roofing/cladding, be transported, handled and</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 9 Bill No. 2 Roof Covering</p>	<p style="text-align: center;">R</p> <hr/> <p style="text-align: center;">R</p>
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<p style="text-align: right;">Brought Forward</p> <p>stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><u>INSPECTION PRIOR TO INSTALLATION</u></p> <p>Before commencing installation, the contractor shall verify that the following items have been checked and accepted:</p> <ol style="list-style-type: none"> a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted. b. Purlins and girths are at the correct spacing and are within the specified tolerances. c. The corners of the roof are square and the wall framework is perpendicular or as specified. d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework. e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square. f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or, so dealt with that direct contact with the sheeting is avoided. g. The contact faces between the purlins or the girths and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding. <p><u>PROTRUSION THROUGH SHEETED SURFACES</u></p> <p>Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 9 Bill No. 2 Roof Covering</p>		R	
		R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<p>sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.</p> <p><u>GUARANTEE</u></p> <p>The manufacturer shall comply with ISO 9001:2008 Quality Management System. SAFLOK 700 sheeting shall be laid in strict accordance with the manufacturer's specifications by a approved Safintra contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer Global Roofing Solutions.</p> <p>CLEANING OF ROOF, ETC.</p> <p>All debris, swarf, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners, sealants, mandrels from pop rivets, off-cuts of sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to steel purlins in strict accordance with the manufacturer's recommendations</u></p>			
1	Roof covering with pitch not exceeding 25 degrees	m2	51
2	Side cladding	m2	9
Carried Forward			R
<p>Section No. 9 Bill No. 2 Roof Covering</p>			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>Sundries</u>			
3	Side wall flashing 550mm girth	m	23
4	Counter flashing	m	23
<u>ROOF INSULATION</u>			
<u>"Sisalation FR 430" heavy industrial grade aluminium foil based insulation</u>			
5	Insulation laid taut over purlins at 1200mm centres and fixed concurrent with roof covering, with stapled longitudinal flap joints including galvanised steel straining wires not exceeding 300mm centres and fixing at top and bottom edges to purlins with and including hoop iron straps.	m2	60
Carried Forward to Summary of Section No. 9			R
Section No. 9			
Bill No. 2			
Roof Covering			

Item No	Quantity	Rate	Amount
<u>BILL NO. 3</u>			
<u>CARPENTRY AND JOINERY</u>			
<u>PREAMBLES</u>			
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<p>Dimensions in descriptions of trusses are nominal and actual measurements are to be obtained from the Architect and/or taken on site before design or fabrication commences</p>			
<u>PRE-TREATMENT OF TIMBER</u>			
<p>This service falls within the areas defined in the National Building Regulations for treatment of timber against insect infestation / insect pest affecting softwood fixed permanently in all buildings.</p> <p>The regulations require that the timber be treated in terms of SABS 05 and to comply with SABS 457, 753, 754 or 1288 as relevant. Tenderer's are to make allowance in there rates.</p>			
Carried Forward			R
<p>Section No. 9 Bill No. 3 Carpentry and Joinery</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>PREFABRICATED ROOF TRUSSES</u>			
All timber roof trusses including nail-plated trusses and bolted trusses with lapped members must comply with SABS 0243: The Design, manufacture and erection of timber trusses.			
The tenderer is to allow in his rates for an Registered Engineer nominated by the Roof truss supplier to issue the TR1 and TR2 certificate for the design and installation of related works to the Principle Agent.			
Prices for the roof trusses are to include for all temporary bracing and supports and for all necessary top and bottom chord bracing, wind bracing and runners where required all over hanging ends to be wrot faced all round			
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>			
<u>Sawn softwood</u>			
<u>The following in plate nailed timber roof trusses with a pitch not exceeding 22 Degrees, from an approved supplier, delivered to site, hoisted into position, fixed and braced on timber wall plates</u>			
1	Mono pitch roof truss with 600mm over hang on both sides side and tie beam spanning 5.00 - 6.00m	No	9
<u>Sawn softwood:</u>			
2	38 x 114mm Wall plates including bedding level in cement mortar	m	18
<u>EAVES, VERGES ETC</u>			
<u>"Everite" or other equally approved fibre-cement fascias and barge boards</u>			
3	15 x 255mm Fascias, including galvanised steel H-profile joiners	m	9
<u>MERANTI DOORS</u>			
<u>Solid meranti door framed and ledged</u>			
4	44mm Door size 813 x 2032mm high hung to steel frames	No	1
Carried Forward			R
Section No. 9 Bill No. 3 Carpentry and Joinery			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Semi-solid core flush doors with Sapele veneer covering on both sides and hard wood edging strips on vertical sides.</u>			
5	44mm Door size 813 x 2032mm high hung to steel frames	No	2	
6	Extra over door 813 x 2032mm high overall for cutting and forming opening approximately 400 x 400mm high.	No	1	
	<u>JOINERY, CUPBOARDS & WORKTOPS</u>			
	<u>Existing Protection Services Staff Office</u>			
7	Wall shelf unit made of white melamine carcass with vancouver maple melamine for cupboard doors, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Wall unit to be mounted on wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 800mm high. Unit comprises one (1) door and one (1) open shelf. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
8	Floor unit made of work top formed of 40mm formica work top with bull nose, white in colour, and white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor and wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 900mm high. Unit comprises cut out for single / double bow sink drop in (sink supplied by others), base, three (3) doors and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1	
	<u>Carried Forward</u>			R
Section No. 9 Bill No. 3 Carpentry and Joinery				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward		R
	<u>Kitchen</u>		
9	Wall shelf unit made of white melamine carcass with vancouver maple melamine for cupboard doors, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Wall unit to be mounted on wall as per supplier recommendation. Overall size of the unit 1800mm long x 600mm wide x 800mm high. Unit comprises four (2) doors and one (1) open shelf. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1
10	Floor unit made of work top formed of 40mm formica work top with bull nose, white in colour, and white melamine carcass with vancouver maple melamine for cupboard doors & drawer, edge strips to comply to SABS 540, complete with concealed hinges on all cupboard doors and 106 x 30mm pull handle chrome finish (code: TS2129MC), handle by "Roco" or similar approved. Unit to be fixed to floor and wall as per supplier recommendation. Overall size of the unit 2215mm long x 600mm wide x 900mm high. Unit comprises cut out for single / double bow sink drop in (sink supplied by others), base, three (3) doors and one (1) drawer. Tenderer are required to refer to architect drawings for full details and specification prior to pricing.	No	1
	<u>BUDGETARY ALLOWANCES</u>		
	<u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u>		
11	Allow an amount of R30,000.000 for steel lockers, amount to be utilized at the discretion of the Principal Agent.	Item	
	Carried Forward to Summary of Section No. 9		R
	Section No. 9		
	Bill No. 3		
	Carpentry and Joinery		

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Quantity	Rate	Amount
<u>BILL NO. 4</u>				
<u>CEILINGS</u>				
<u>PREAMBLES</u>				
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
<u>SUSPENDED CEILINGS</u>				
<u>'OWA' or other equally approved 12.5mm Vinyl Faced Gypsum Ceiling Panels, face-covered with white embossed vinyl, size 1200 x 600mm, laid on fire rated Cliq system S3 exposed demountable suspension system including galvanised main tees, cross tees, etc., all suspended with galvanised hangers at centres not exceeding 1200mm and all installed to manufacturer's instructions.</u>				
1	Ceilings suspended not exceeding 1m below structural steel roof trusses	m2	50	
2	Extra over for 1200 x 600mm Opening in ceiling for light fittings	No	3	
3	Extra over for 600 x 600mm Opening in ceiling for light fittings	No	3	
4	Extra over for 40mm Diameter opening in ceiling panels for light fittings, fire detection, etc.	No	3	
5	Extra over for 100mm diameter opening in ceiling panels for extraction	No	2	
<u>Shadowline, cornices, etc to ceilings</u>				
6	'OWAconstruct' or other equally approved pre-painted shadowline W-trim plugged at 200mm centres and all installed in accordance to the manufacturer's specification	m	50	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 4				
Ceilings				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 5</u>			
	<u>IRONMONGERY</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>LOCKSETS, ETC</u>			
	<u>Manufactured by "Dormakaba" or other equally approved</u>			
1	Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. (D037D SS)	No	1	
2	Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm. (D036S SS)	No	2	
3	43mm five pin Euro-profile Single Cylinder Grand Master Keyed (DSC104301 GMK)	No	1	
4	66mm five pin Euro-profile Double Cylinder Grand Master Keyed (DDC106601 GMK)	No	2	
	<u>HANDLES</u>			
	<u>Manufactured by "Dormakaba" or other equally approved</u>			
5	DPH301C Pull handle BT fixed on a 75 x 170 x 1.2mm thick Grade 430 stainless steel plate with no cylinder cutout. Stainless steel plate to have 4 countersunk holes for screw fixing. (Code: DHP-430-BL-SF 75 x 170)	No	1	
6	150 x 300 x 1.2mm thick Grade 430 stainless steel plate with cylinder cutout right. Stainless steel plate to have 6 countersunk holes for screw fixing. (Code: DPP-430-CR-SF150 x 300)	No	1	
	Carried Forward		R	
	Section No. 9 Bill No. 5 Ironmongery			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
7	Lever handle on 170 x 170mm plate with cylinder cutout (Code: TH120 BP Cyl S.S)	No	2
<u>PUSH PLATES AND KICK PLATES</u>			
<u>Manufactured by "Dormakaba" or other equally approved</u>			
8	300 x (width of door) x 1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door) (DKP-430-SF 300)	No	6
<u>LETTERS, NAMEPLATES, ETC</u>			
<u>Manufactured by "Dormakaba" or other equally approved</u>			
9	150 x 150mm MALE sign (Code: DSS-130 M)	No	1
10	150 x 150mm FEMALE sign (Code: DSS-131 F)	No	1
11	150 x 150mm ELECTRICAL sign (Code: DSS-136 EL)	No	1
<u>STATUTORY SIGNAGE</u>			
<u>Statutory signage to be SABS approved and photo luminescent, external signage to be UV rated</u>			
<u>Red and white single sided signage screwed fixed on to walls as per manufacturer's details</u>			
12	190 x 190mm Fire extinguisher sign	No	1
<u>NON-STATUTORY SIGNAGE (PRASA SPECIFICATION)</u>			
<u>Projecting: Iconography</u>			
13	Double sided signage, non-illuminated overall size 500 x 500mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.1, page 4 of 12 of Prasa Specification, for full details.	No	1
14	Double sided signage, non-illuminated overall size 600 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.2, page 4 of 12 of Prasa Specification, for full details.	No	1
Carried Forward			R
Section No. 9 Bill No. 5 Ironmongery			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>DOOR CLOSURE</u>			
<u>Manufactured by "Dormakaba" or other equally approved</u>			
15	NON HOLD OPEN Cam action slide channel door closer. Max door width 950mm. Closing Force EN 3. Hydraulic speed control. Pull-side door leaf fixing (Standard), Push-side transom fixing. Door closer compliant with EN 1154. Door closer is CERTI FIRE approved (Certificate No. CF 119) for door types ITT 120, MM/IMM 240. Certified manufacturer to ISO 9001 (TS91B - SL)	No	1
<u>BATHROOM FITTINGS</u>			
16	"Franke Rodan RODX672" or other equally approved 0,8mm thick satin finished stainless steel double toilet roll holder with spindle system (Code: 359987), size 144 x 138 x 301mm high for 2 rolls maximum 120mm diameter with cylinder lock with standard Franke Key, plugged and screwed to the wall with stainless steel screws.	No	1
17	"Bathroom Butler Series 4600" or other equally approved paper holder type II in polished grade 304 stainless steel finish (Code: 4602POLLS), overall size 180 x 97 x 100mm, plugged and screwed to wall with stainless steel screws.	No	1
18	"XLerator 2.5Kw" or other equally approved 270W x 240H x 200Dmm Automatic Electric Stainless Steel Hand Dryer - CLX2500 or other equally approved satin finish stainless steel casing	No	1
<u>"Chilli-B" or other equally approved:</u>			
19	Soap dispenser (code: P-SDM-650) bolted to walls including all necessary fittings	No	1
<u>SUNDRIES</u>			
<u>Manufactured by "Dormakaba" or other equally approved</u>			
20	Floor Mounted Door Stop (DDS-SS-017)	No	3
Carried Forward			R
Section No. 9 Bill No. 5 Ironmongery			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R
21	Hat and Coat Hook with rubber buffer (DHC-SS-031B)	No	1	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 5				
Ironmongery				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>METALWORK</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>			
	<u>1.2mm Double rebated frames suitable for one brick wall</u>			
1	Frame for door 813 x 2032mm high	No 3		
	<u>GALVANISED STEEL GATES, SCREENS, ETC</u>			
	<u>Hot dipped galvanised steel gates</u>			
2	Single gate size 900 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fame 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate	No 1		
	<u>HOT DIPPED GALVANISED STEEL BURGLAR BARS</u>			
	<u>50 x 50mm Hot dipped galvanised vertical bars with rounded ends and polished edges and fixed to wall with 10mm diameter counter sunk expansion bolts through 19mm diameter steel pipe spacers with bolt heads securely epoxy fixed to frame. 19mm Diameter hot dipped galvanised steel pipes equally spaced and welded to vertical falt bars.</u>			
3	Burglar bar size 600 x 900mm high. Tenderers are referred to Architects drawings annexed to these Bills of Quantities	No 1		
	Carried Forward		R	
	Section No. 9 Bill No. 6 Metalwork			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
4	Burglar bar size 4225 x 1275mm high. Tenderers are referred to Architects drawings annexed to these Bills of Quantities	No	2	
	<u>ANODISED ALUMINIUM LOUVRE UNITS</u>			
	<u>'Trox' or other equally approved natural anodised louvre units screwed into wooden door</u>			
5	Type AGS-T size 400mm wide x 400mm high	No	1	
	<u>ALUMINIUM WINDOWS, ETC.</u>			
	<u>Aluminium window complete with subframes, ironmongery, glass, sealing, etc., and fixing to brickwork or concrete</u>			
	<u>Glazing thickness in accordance with table 1 of SANS 10400 Part 'N'</u>			
6	Purpose made 'natural anodised' powder coated aluminium window including opening panel, all glazing with 6.38mm Low-E glazing, overall size 600 x 900mm high. Tenderers are referred to Architect's drawings annexed to these Bills of Quantities	No	1	
7	Purpose made 'natural anodised' powder coated aluminium window including opening panel, all glazing with 6.38mm Low-E glazing, overall size 4225 x 1275mm high. Tenderers are referred to Architect's drawings annexed to these Bills of Quantities	No	2	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 6				
Metalwork				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Quantity	Rate	Amount
<u>BILL NO. 8</u>			
<u>TILING</u>			
<u>PREAMBLES</u>			
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Fixing</u>			
Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.			
Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for tiling key-coat.			
Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the Tal Professional range of products as recommended by the manufacturer.			
<u>WALL TILING</u>			
<u>200 x 200 x 6mm Matt white "Samca MWC4" or other equally approved glazed ceramic tiles fixed with an adhesive to plastered walls (plaster elsewhere measured) and flush pointed with waterproofing jointing compound to match tile colour</u>			
1	On splash backs	m2	2
Carried Forward			R
Section No. 9 Bill No. 8 Tiling			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE20 A 600AH) with 3mm grouting fixed with 'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
2	On walls (Black)	m2	10		
3	On narrow widths	m2	1		
	<u>'Union Tiles' or other equally approved 300 x 600mm full bodied porcelain tiles (Code: SE SPA 6100 3x6 AH) with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to plastered walls (plaster elsewhere measured) and flush pointed with "Tal Wall or Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
4	On walls (Ivory)	m2	10		
5	On narrow widths	m2	1		
	<u>FLOOR TILING</u>				
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6879N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
6	On floors	m2	40		
	<u>'Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6876N) tiles with 3mm grouting fixed with "'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>				
7	On floors	m2	10		
8	300mm high skirting	m	44		
	Carried Forward			R	
	Section No. 9				
	Bill No. 8				
	Tiling				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>SUNDRIES</u>			
<u>"Genesis" or other equally approved edge trims:</u>			
9	27 x 10 x 10mm aluminium square edge trim (Code: TDF 104.81)	m	58
10	21 x 10mm aluminium straight edge trim (Code: ESA 100.80)	m	1
<u>"Genesis" or other equally approved movement joints:</u>			
11	Aluminium standard intermediate joints (Code: MMA100.35)	m	9
<u>Polysulphide soft joint or equally approved at 3.0m intervals both ways as per supplier instructions</u>			
12	5 x 10mm Joints in floor tiles	m	33
Carried Forward to Summary of Section No. 9			R
Section No. 9			
Bill No. 8			
Tiling			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 9</u>			
	<u>PLUMBING AND DRAINAGE</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>RAINWATER DISPOSAL</u>			
	<u>1.6mm Gauge aluminium gutter box</u>			
1	250 x 200mm High purpose made box gutter	m	9	
2	Extra over gutter box for stop end	No	2	
3	Extra over gutter box for 110mm outlet	No	2	
	<u>"Marley" or other equally approved uPVC downpipes</u>			
4	110mm Diameter rainwater pipe	m	8	
5	Extra over 110mm rainwater pipe for bend	No	4	
6	Extra over 110mm rainwater pipe for shoe	No	2	
	<u>SANITARY FITTINGS</u>			
	<u>WC</u>			
7	"Vaal Sanitaryware" or other equally approved vitreous china Parktown 90 degree outlet top inlet or back inlet flushvalve (code: 431600) and double flap plastic seat	No	1	
8	"Grohe" or other equally approved 25mm diameter chrome flush valve for wc (code: 37609) for concealed installation with push button actuator, 1.2 - 5.0 bar flow pressure, flow rate adjustment, including 25mm supply pipe, stop valve, flush pipe and 300mm extension pipe to wc.	No	1	
	Carried Forward			
	Section No. 9			
	Bill No. 9			
	Plumbing and drainage			
			R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Wash Hand Basin (Public Ablutions)</u>			
9	"Vaal Sanitaryware" or other equally approved Bantam vitreous China cloakroom basin colour White (Code: 7030), size 455 x 290mm with one taphole (LHS) including integrated overflow and chain stay, basin bolted to wall with two 10mm bolts (Code: 8448Z0) and sealed with silicone sealant where basin meets wall.	No	1
10	"Cobra" or other equally approved self-closing push button metering spout, wall type with non-hold open feature, flow time 1 - 20 secs.	No	1
11	GH angle valve bau 15x15mm	No	1
12	303-32 Basin waste	No	1
13	ISM Gio bottle trap CP 32mm	No	1
<u>Kitchen Sink - Single Bowl</u>			
14	"Franke" or other equally approved Project line Model PLN611 stainless steel single end bowl inset sink (Code: 821047), overall size 800 x 460mm wide with one 340 x 370 x 150mm deep bowl, fitted onto cupboard (cupboard elsewhere measured) including clear silicon, 38mm waste fitting and PVC trap (trap elsewhere measured).	No	1
15	"Cobra Watertech Noka" or other equally approved 15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges (code: NA-970), manufactured in accordance with SANS 226:2004 Type 1 (BS 5412).	No	1
16	GH angle valve bau 15x10mm	No	2
17	32 x 40mm Butyl rubber "P" or "S" trap jointed to waste outlet fitting and uPVC pipe including clamps	No	1
<u>TAPS, VALVES, ETC.</u>			
Taps, valves, etc. jointed to copper pipes are to include brass connectors, adaptors etc. Installation and fixings to be as per manufacturers specifications and SANS 1808-9 compliant.			
Carried Forward			R
Section No. 9 Bill No. 9 Plumbing and drainage			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
18	15mm Ball-O- stop valves	No	1	
19	22mm Ball-O- stop valves	No	1	
<u>SANITARY PLUMBING</u>				
<u>uPVC pipes cast into concrete slabs, fixed to soffit and walls, or chased into walls, etc. in accordance with manufacturers specifications</u>				
20	50mm Pipes	m	3	
21	110mm Pipes	m	5	
<u>Extra over uPVC pipes for:</u>				
22	50mm Bend	No	4	
23	50mm Access bend	No	2	
24	50mm Coupling	No	2	
25	110mm Bend	No	1	
26	110mm Access bend	No	1	
27	110mm Access junction	No	1	
28	110mm Pan connector	No	1	
29	110mm Two way vent valve	No	1	
30	110mm Coupling	No	1	
<u>DOMESTIC WATER SUPPLIES</u>				
<u>Class 1 copper pipes fixed to soffit and walls, or chased into walls, etc. in accordance with manufacturers specifications:</u>				
All piping embedded into concrete or chased into walls to be twice wrapped in strong approved building paper.				
Rates for surface mounted copper pipe shall be deemed to include all fixtures and fittings for pipes fixed to walls, in chases, and in ceilings.				
Carried Forward				R
Section No. 9 Bill No. 9 Plumbing and drainage				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
31	15mm Pipes	m	6	
32	22mm Pipes	m	9	
<u>Extra over copper pipes for capillary fittings:</u>				
33	15mm Bend	No	6	
34	22mm Bend	No	3	
35	22 x 15mm Bend	No	2	
36	22mm Tees	No	1	
37	22 x 15mm Tees	No	2	
<u>Extra over copper pipes for brass compression fittings:</u>				
38	15mm Flexible service pipe 300mm girth	No	3	
39	15mm Wallplate elbow	No	3	
40	22mm Wallplate elbow	No	1	
41	15mm Coupling	No	3	
42	22mm Coupling	No	1	
<u>FIRE APPLIANCES</u>				
43	4.5kg Carbon dioxide fire extinguisher including approved bracket fixed to wall	No	1	
<u>PIPE INSULATION</u>				
<u>Thermafex snap on sectional pipe insulation, neatly cut around pipe as required</u>				
44	Insulation to 15mm diameter piping and couplings including working around fittings	m	2	
<u>ELECTRIC WATER HEATERS</u>				
Carried Forward				R
Section No. 9 Bill No. 9 Plumbing and drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Water heaters and accessories:</u>			
45	10 Litre "Hydroboil" or other equally approved over sink electric water heater	No	1	
	<u>TESTING</u>			
46	Allow for testing the whole of the Stormwater drainage, Sewer drainage, Plumbing, Water and Fire supplies and all fittings to the satisfaction of the Architect, Engineer and Local Authorities. All defective work is to be taken out and replaced at the contractor's expense and the whole re-tested until acceptable		Item	
	<u>AS-BUILT DRAWINGS</u>			
47	Provide a full set of as-built drawings on completion of the installation		Item	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 9				
Plumbing and drainage				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PAINTWORK</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>PREPARATORY WORK TO EXISTING WORK</u>			
	<u>Previously painted plastered surfaces</u>			
	Surfaces shall be thoroughly water pressure cleaned and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished to match existing surfaces.			
	<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED SURFACES</u>			
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>			
	<u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved Primer (PP700) and two coats "Velvagro" water based paint for interior use</u>			
1	On walls	m2	178	
2	On narrow widths	m2	18	
	<u>PAINTWORK, ETC TO NEW SURFACES</u>			
	<u>ON METAL SURFACES</u>			
	<u>One coat calcium plumbate primer on:</u>			
3	Backs of galvanised steel door frames before fixing	m2	6	
	Carried Forward		R	
	Section No. 9			
	Bill No. 11			
	Paintworks			

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R
	<u>"Plascon" or other equally approved one coat red oxideon primer, one coat alkyd based universal undercoat and two coats professional gloss enamel (PBS 1000) paint</u>			
4	On door frames	m2	6	
5	On gate	m2	4	
6	On burglar guard	m2	23	
	<u>ON WOOD SURFACES</u>			
	<u>"Plascon" or other equally approved primer, one coat alkyd based universal undercoat and two coats professional gloss enamel paint</u>			
7	On doors	m2	12	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 11				
Paintworks				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Bill No	SECTION SUMMARY - Protection Services (I)	Page No	Amount
1	Alterations	197	
2	Roof Covering	202	
3	Carpentry and Joinery	206	
4	Ceilings	207	
5	Ironmongery	211	
6	Metalwork	213	
7	Plastering	214	
8	Tiling	217	
9	Plumbing and drainage	222	
10	Glazing	223	
11	Paintworks	225	
Carried to Final Summary			R
Section No. 9			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 1</u>			
	<u>EXTERNAL WORKS (ALL TRADES)</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SITE CLEARANCE</u>			
1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	2,750	
	<u>PROVING OF EXISTING SERVICES</u>			
	No pegs or stakes shall be driven or any excavation made before the Contractor has established that there are no underground services, which may be damaged thereby.			
	Any damage shall be reported immediately to the Principal Agent, or to the personnel in charge at the nearest station.			
	Any previously uncharted underground services encountered by the Contractor during the course of his activities shall be reported immediately to the Principal Agent who shall ensure necessary inclusion in the "as built" drawings.			
	Carried Forward		R	
	Section No. 10			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<p>Any claims relating to standing time costs resulting from proving of services shall be for the Contractors account. The services are stated below but are limited to and is to be identified by the Engineer when encountered on site. The contractor is to make reasonable allowance for possible delays and standing time in his rates for tasks relating to works undertaken in the various trades with and including in the Preliminaries & General. The Contractor is to familiarize himself/herself with the possible services prior to pricing the bills of quantities.</p> <p>The contractor is to take into account the following services but not limited to:</p> <ol style="list-style-type: none"> 1. Electrical lines 2. Stormwater lines 3. Sewer lines 4. Domestic or potable water supply lines 5. Fire water supply lines <p><u>Restrictive excavations for proving of services</u></p> <p><u>Restrictive excavations in earth not exceeding 2m deep</u></p>			
2	Trenches	m3	330
<u>Extra over restrictive excavations in earth for excavation in</u>			
3	Intermediate rock	m3	17
<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavation not exceeding 1,5m deep	m2	660
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod. AASHTO density</u>			
5	Backfilling to trenches	m3	330
<u>Re-routing</u>			
6	Relocating and re-routing of existing services	m	330
Carried Forward			R
Section No. 10 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>STORMWATER DRAINAGE</u>			
7	Pressure clean or jetting existing stormwater line	m	275
<u>Covers, etc.</u>			
8	450 x 450mm Heavy duty cast iron stormwater grating and frame and welded to existing frames	No	4
9	450 x 600mm Heavy duty cast iron stormwater grating and frame, welded to existing frames	No	3
<u>SEWER DRAINAGE</u>			
10	Pressure clean or jetting existing sewer line	m	275
<u>Covers, frames, etc.</u>			
11	1130mm Diameter heavy duty precast concrete cover and frame, fitted over existing manholes	No	5
<u>SPECIALIST SERVICES</u>			
<u>Precast concrete circular manholes (covers elsewhere measured) formed of manhole rings (SABS 1294) including excavation, risk of collapse, working space, backfilling with selected material from the excavations, cart away surplus material, shoring, hoisting in position, step irons, benching and haunching</u>			
12	Precast concrete manhole rings (SABS 1294) size internally 1000mm diameter not exceeding 1m deep including excavation, risk of collapse, working space, hoisting in position, backfilling with selected excavated material, cart away surplus material, shoring, step irons, benching and haunching	No	5
<u>Covers, Frames, etc.</u>			
13	550mm Diameter heavy duty precast manhole cover and frame	No	5
14	610mm Diameter 2A polymer manhole cover and frame to SABS specification SANS 1882/2003, fitted over existing manholes	No	8
Carried Forward			R
Section No. 10 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
15	610mm Diameter 4A polymer manhole cover and frame to SABS specification SANS 1882/2003, fitted over existing manholes	No	7	
16	1130mm Diameter heavy duty precast concrete cover and frame, fitted over existing manholes	No	3	
	<u>FENCING</u>			
	<u>Alterations</u>			
	<u>Taking out/off and removing sundry metalwork</u>			
17	Existing damaged 1,8m high steel palisade fencing	m	110	
	<u>Metalwork</u>			
	<u>Galvanised steel palisade fencing:</u>			
18	1,8m High palisade fencing comprising of 2,2m high posts at 2,0m centres, V-type top and bottom rails and thirteen 1,8m high pales between posts, set up and fixed complete including 400 x 400 x 600mm concrete base to posts	m	110	
	<u>PLATFORM AREAS</u>			
	<u>Alterations</u>			
	<u>Saw cut, breaking up and removing premix including reducing ground by 150mm deep</u>			
19	Platforms	m2	2,090	
	<u>Preparatory work to existing surfaces</u>			
20	Pressure clean surfaces of concrete surfaces	m2	440	
	<u>Taking out and removing sundry metalwork</u>			
21	Signage panel from walls approximate size 750 x 1200mm high	No	4	
	Carried Forward			R
	Section No. 10			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
22	Signage structure comprises of steel posts (2000mm high) bolted onto concrete, signage approximate size 3000 x 500mm high, and hacking up concrete bases including back filling with imported soil and prepare surfaces to receive new (new elsewhere measured).	No	4	
	<u>Concrete spalling</u>			
	<u>Concrete spalling to existing concrete surfaces to included saw cut, break back 50mm to remove loose concrete aggregates and to expose steel, clean & wire brush steel, apply ABE Durarep ZR primer or similar approved to steel, apply Epidermix 344 or similar approved, apply ABE Durarep FR or similar approved 50mm thick, etc. all in accordance to engineer specifications</u>			
23	Existing concrete edges of platforms	m2	6	
	<u>Earthworks</u>			
	<u>Excavation other than bulk</u>			
24	Excavate to reduce levels for sub-base not exceeding 2m deep.	m3	523	
25	Extra over all excavations for loading, carting and dumping surplus excavated material to a dumping site to be found by the Contractor	m3	523	
26	Compaction of ground surfaces, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	2,090	
27	150mm Thick layer of G5 sub-base course under platforms, etc., with selected and natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 95% Mod. AASHTO density.	m3	314	
28	Keeping excavations free of all water other than subterranean water		Item	
29	brand of weed killer applied by a registered pest control company under roads, parking and paving.	m2	2,090	
	Carried Forward			R
	Section No. 10			
	Bill No. 1			
	External Works			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

		R	
30	Allow for the execution of all the prescribed density tests on filling, etc., as pointed out by the Engineer on site to the approval of the Principal Agent.		
		Item	
<u>Concrete, Formwork and Reinforcement</u>			
<u>25MPa/19mm concrete</u>			
31	Surface beds on waterproofing	m3	17
<u>Test cubes</u>			
32	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3
<u>Finishing top surfaces of concrete smooth with a wood float</u>			
33	Surface beds, slabs, etc,	m2	165
<u>Rough formwork to sides</u>			
34	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	550
<u>Expansion joints with 12mm bitumen impregnated softboard between vertical concrete surfaces, including necessary formwork</u>			
35	12mm Joints not exceeding 300mm high	m	583
<u>Fabric reinforcement</u>			
36	Type ref. 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	165
<u>Waterproofing</u>			
<u>One layer of 375 micron "Consol Plastics" or other equally approved waterproof sheeting sealed at laps</u>			
37	Under surface beds	m2	165
Carried Forward			R
Section No. 10 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>"Sika" or other equally approved two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u>			
38	12 x 12mm In horizontal expansion joints including raking out expansion joint filler as necessary	m	583	
	<u>Ironmongery</u>			
	<u>Non-Statutory Signage (Prasa Specification)</u>			
	<u>Suspended Signs: Informational</u>			
39	Double sided signage, non-illuminated overall size 90mm wide x 500mm high x 3000mm long frame box. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type A1.2, page 1 of 12 and B01 of Prasa Specification, for full details.	No	2	
	<u>Projecting: Iconography</u>			
40	Double sided signage, non-illuminated overall size 500 x 500mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.1, page 4 of 12 of Prasa Specification, for full details.	No	4	
41	Double sided signage, non-illuminated overall size 600 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.2, page 4 of 12 of Prasa Specification, for full details.	No	2	
	<u>Projecting: Naming</u>			
42	Double sided signage, non-illuminated overall size 500 x 3000mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C3.1, page 4 of 12 of Prasa Specification, for full details.	No	2	
	<u>Floor Mounted: End of Platform, Prohibitive</u>			
43	Double sided signage, non-illuminated overall size 300 x 1800mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type E1.3, page 7 of 12 of Prasa Specification, for full details.	No	2	
	Carried Forward			R
	Section No. 10			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Floor Mounted: Naming</u>			
44	Double sided signage, non-illuminated overall size 2600 x 750mm high fixed on posts. 2x posts 3600mm long with 600mm cast in concrete base, including cutting asphalt, excavations, backfilling and patching surfaces with asphalt etc. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type E2.1, page 7 of 12 of Prasa Specification, for full details.	No	2	
	<u>Internal Signage: Prohibitive</u>			
45	Wall mounted signage, overall size 300 x 800mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.1, page 11 of 12 of Prasa Specification, for full details.	No	2	
	<u>Internal Signage: Digitally printed</u>			
46	Wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.2, page 11 of 12 of Prasa Specification, for full details.	No	6	
47	Door and wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J2.1, page 11 of 12 of Prasa Specification, for full details.	No	6	
	<u>Plastering</u>			
	<u>Screeds wood floated, on concrete</u>			
48	30mm Thick on floors	m2	165	
	<u>Floor Tiling</u>			
	<u>'Union Tiles' or other equally approved 300 x 300 x 30mm Cement base product with Tac pins floor tiles (Code: ADMTAC21T) with 5mm grouting fixed with 'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
49	On floors	m2	165	
	Carried Forward			R
	Section No. 10 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>"Genesis" or other equally approved movement joints:</u>			
50	Aluminium standard intermediate joints (Code: MMA100.35)	m	28	
	<u>Polysulphide soft joint or equally approved at 3.0m intervals both ways as per supplier instructions</u>			
51	5 x 10mm Joints in floor tiles	m	110	
	<u>Tarmacdam</u>			
	<u>Bituminous premix road surfacing</u>			
52	Prime and lay 40mm thick 40/50 pen. Bitumen 9.5mm Stone, laid compacted, to falls	m2	1,925	
	<u>Paintwork</u>			
	<u>100mm White luminous painted safety line on concrete surfaces as per Prasa specification</u>			
53	100mm White solid line	m	550	
	<u>Platform marking in English and Zulu – painted with "Plascon" or other equally approved road marking paint on asphalt surfaces – colour yellow - font to be Arial</u>			
54	Platform marking to write as "NO STANDING BEYOND THE YELLOW LINE" overall size 4620 x 200mm high	No	30	
55	Platform marking to write as "IMA NGEMUVA KOLAYINI OPHUZI" overall size 3580 x 200mm high	No	30	
56	Covid 19 social distancing platform marking to write as 200mm diameter circular line of 50mm wide solid line	No	460	
	<u>Platform Furnitures, etc.</u>			
	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u>			
57	Back-to-back sides bench 1800mm long with straight leg	No	5	
	Carried Forward			R
	Section No. 10			
	Bill No. 1			
	External Works			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
	<p><u>"Wilson Stone" or other equally approved steel little swing bin size 400mm diameter x 750mm high with steel ash tray galvanised with polyurethane paint fixed on concrete surfaces with chemical anchor bolts as per supplier recommendation</u></p>			
58	Steel little swing bin size 400mm diameter x 750mm high	No	5	
	<p><u>Budgetary Allowances</u></p> <p><u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u></p>			
59	Allow an amount of R25,000.00 for removal of existing platform services & furnitures, light poles, signage boards, etc., amount to be utilized at the discretion of the Principal Agent.		Item	25,000.00
Carried to Final Summary				R
Section No. 10				
Bill No. 1				
External Works				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 11</u>			
	<u>BILL NO. 1</u>			
	<u>EXTERNAL WORKS (ALL TRADES)</u>			
	<u>PREAMBLES</u>			
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item			
	<u>SITE CLEARANCE</u>			
1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	2,750	
	<u>PROVING OF EXISTING SERVICES</u>			
	No pegs or stakes shall be driven or any excavation made before the Contractor has established that there are no underground services, which may be damaged thereby.			
	Any damage shall be reported immediately to the Principal Agent, or to the personnel in charge at the nearest station.			
	Any previously uncharted underground services encountered by the Contractor during the course of his activities shall be reported immediately to the Principal Agent who shall ensure necessary inclusion in the "as built" drawings.			
	Carried Forward		R	
	Section No. 11			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<p>Any claims relating to standing time costs resulting from proving of services shall be for the Contractors account. The services are stated below but are limited to and is to be identified by the Engineer when encountered on site. The contractor is to make reasonable allowance for possible delays and standing time in his rates for tasks relating to works undertaken in the various trades with and including in the Preliminaries & General. The Contractor is to familiarize himself/herself with the possible services prior to pricing the bills of quantities.</p> <p>The contractor is to take into account the following services but not limited to:</p> <ol style="list-style-type: none"> 1. Electrical lines 2. Stormwater lines 3. Sewer lines 4. Domestic or potable water supply lines 5. Fire water supply lines <p><u>Restrictive excavations for proving of services</u></p> <p><u>Restrictive excavations in earth not exceeding 2m deep</u></p>			
2	Trenches	m3	330
<u>Extra over restrictive excavations in earth for excavation in</u>			
3	Intermediate rock	m3	17
<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavation not exceeding 1,5m deep	m2	660
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod. AASHTO density</u>			
5	Backfilling to trenches	m3	330
<u>Re-routing</u>			
6	Relocating and re-routing of existing services	m	330
Carried Forward			R
Section No. 11 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>STORMWATER DRAINAGE</u>			
7	Pressure clean or jetting existing stormwater line	m	275
<u>Covers, etc.</u>			
8	450 x 450mm Heavy duty cast iron stormwater grating and frame and welded to existing frames	No	4
9	450 x 600mm Heavy duty cast iron stormwater grating and frame, welded to existing frames	No	3
<u>SEWER DRAINAGE</u>			
10	Pressure clean or jetting existing sewer line	m	275
<u>Covers, frames, etc.</u>			
11	1130mm Diameter heavy duty precast concrete cover and frame, fitted over existing manholes	No	5
<u>SPECIALIST SERVICES</u>			
<u>Precast concrete circular manholes (covers elsewhere measured) formed of manhole rings (SABS 1294) including excavation, risk of collapse, working space, backfilling with selected material from the excavations, cart away surplus material, shoring, hoisting in position, step irons, benching and haunching</u>			
12	Precast concrete manhole rings (SABS 1294) size internally 1000mm diameter not exceeding 1m deep including excavation, risk of collapse, working space, hoisting in position, backfilling with selected excavated material, cart away surplus material, shoring, step irons, benching and haunching	No	5
<u>Covers, Frames, etc.</u>			
13	550mm Diameter heavy duty precast manhole cover and frame	No	5
14	610mm Diameter 2A polymer manhole cover and frame to SABS specification SANS 1882/2003, fitted over existing manholes	No	8
Carried Forward			R
Section No. 11 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
15	610mm Diameter 4A polymer manhole cover and frame to SABS specification SANS 1882/2003, fitted over existing manholes	No	7	
16	1130mm Diameter heavy duty precast concrete cover and frame, fitted over existing manholes	No	3	
<u>FENCING</u>				
<u>Alterations</u>				
<u>Taking out/off and removing sundry metalwork</u>				
17	Existing damaged 1,8m high steel palisade fencing	m	110	
<u>Metalwork</u>				
<u>Galvanised steel palisade fencing:</u>				
18	1,8m High palisade fencing comprising of 2,2m high posts at 2,0m centres, V-type top and bottom rails and thirteen 1,8m high pales between posts, set up and fixed complete including 400 x 400 x 600mm concrete base to posts	m	110	
<u>PLATFORM AREAS</u>				
<u>Alterations</u>				
<u>Saw cut, breaking up and removing premix including reducing ground by 150mm deep</u>				
19	Platforms	m2	2,090	
<u>Preparatory work to existing surfaces</u>				
20	Pressure clean surfaces of concrete surfaces	m2	440	
<u>Taking out and removing sundry metalwork</u>				
21	Signage panel from walls approximate size 750 x 1200mm high	No	4	
Carried Forward				R
Section No. 11 Bill No. 1 External Works				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
22	Signage structure comprises of steel posts (2000mm high) bolted onto concrete, signage approximate size 3000 x 500mm high, and hacking up concrete bases including back filling with imported soil and prepare surfaces to receive new (new elsewhere measured).	No	4	
	<u>Concrete spalling</u>			
	<u>Concrete spalling to existing concrete surfaces to included saw cut, break back 50mm to remove loose concrete aggregates and to expose steel, clean & wire brush steel, apply ABE Durarep ZR primer or similar approved to steel, apply Epidermix 344 or similar approved, apply ABE Durarep FR or similar approved 50mm thick, etc. all in accordance to engineer specifications</u>			
23	Existing concrete edges of platforms	m2	6	
	<u>Earthworks</u>			
	<u>Excavation other than bulk</u>			
24	Excavate to reduce levels for sub-base not exceeding 2m deep.	m3	523	
25	Extra over all excavations for loading, carting and dumping surplus excavated material to a dumping site to be found by the Contractor	m3	523	
26	Compaction of ground surfaces, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	2,090	
27	150mm Thick layer of G5 sub-base course under platforms, etc., with selected and natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 95% Mod. AASHTO density.	m3	314	
28	Keeping excavations free of all water other than subterranean water		Item	
29	brand of weed killer applied by a registered pest control company under roads, parking and paving.	m2	2,090	
	Carried Forward			R
	Section No. 11			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
30	Allow for the execution of all the prescribed density tests on filling, etc., as pointed out by the Engineer on site to the approval of the Principal Agent.	Item	
<u>Concrete, Formwork and Reinforcement</u>			
<u>25MPa/19mm concrete</u>			
31	Surface beds on waterproofing	m3	17
<u>Test cubes</u>			
32	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3
<u>Finishing top surfaces of concrete smooth with a wood float</u>			
33	Surface beds, slabs, etc,	m2	165
<u>Rough formwork to sides</u>			
34	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	550
<u>Expansion joints with 12mm bitumen impregnated softboard between vertical concrete surfaces, including necessary formwork</u>			
35	12mm Joints not exceeding 300mm high	m	583
<u>Fabric reinforcement</u>			
36	Type ref. 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	165
<u>Waterproofing</u>			
<u>One layer of 375 micron "Consol Plastics" or other equally approved waterproof sheeting sealed at laps</u>			
37	Under surface beds	m2	165
Carried Forward			R
Section No. 11 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>"Sika" or other equally approved two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u>			
38	12 x 12mm In horizontal expansion joints including raking out expansion joint filler as necessary	m	583	
	<u>Ironmongery</u>			
	<u>Non-Statutory Signage (Prasa Specification)</u>			
	<u>Suspended Signs: Informational</u>			
39	Double sided signage, non-illuminated overall size 90mm wide x 500mm high x 3000mm long frame box. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type A1.2, page 1 of 12 and B01 of Prasa Specification, for full details.	No	2	
	<u>Projecting: Iconography</u>			
40	Double sided signage, non-illuminated overall size 500 x 500mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.1, page 4 of 12 of Prasa Specification, for full details.	No	4	
41	Double sided signage, non-illuminated overall size 600 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C2.2, page 4 of 12 of Prasa Specification, for full details.	No	2	
	<u>Projecting: Naming</u>			
42	Double sided signage, non-illuminated overall size 500 x 3000mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type C3.1, page 4 of 12 of Prasa Specification, for full details.	No	2	
	<u>Floor Mounted: End of Platform, Prohibitive</u>			
43	Double sided signage, non-illuminated overall size 300 x 1800mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type E1.3, page 7 of 12 of Prasa Specification, for full details.	No	2	
	Carried Forward			R
	Section No. 11			
	Bill No. 1			
	External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Floor Mounted: Naming</u>			
44	Double sided signage, non-illuminated overall size 2600 x 750mm high fixed on posts. 2x posts 3600mm long with 600mm cast in concrete base, including cutting asphalt, excavations, backfilling and patching surfaces with asphalt etc. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type E2.1, page 7 of 12 of Prasa Specification, for full details.	No	2
<u>Internal Signage: Prohibitive</u>			
45	Wall mounted signage, overall size 300 x 800mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.1, page 11 of 12 of Prasa Specification, for full details.	No	2
<u>Internal Signage: Digitally printed</u>			
46	Wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J1.2, page 11 of 12 of Prasa Specification, for full details.	No	6
47	Door and wall mounted signage, overall size 300 x 300mm high. Fixing all in accordance to specialist details. Tenderer are required to refer to Sign Type J2.1, page 11 of 12 of Prasa Specification, for full details.	No	6
<u>Plastering</u>			
<u>Screeds wood floated, on concrete</u>			
48	30mm Thick on floors	m2	165
<u>Floor Tiling</u>			
<u>'Union Tiles' or other equally approved 300 x 300 x 30mm Cement base product with Tac pins floor tiles (Code: ADMTAC21T) with 5mm grouting fixed with 'Tal Goldstar 6' and Tal Bond" tile adhesive to screeded / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u>			
49	On floors	m2	165
Carried Forward			R
Section No. 11 Bill No. 1 External Works			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>"Genesis" or other equally approved movement joints:</u>			
50	Aluminium standard intermediate joints (Code: MMA100.35)	m	28	
	<u>Polysulphide soft joint or equally approved at 3.0m intervals both ways as per supplier instructions</u>			
51	5 x 10mm Joints in floor tiles	m	110	
	<u>Tarmacdam</u>			
	<u>Bituminous premix road surfacing</u>			
52	Prime and lay 40mm thick 40/50 pen. Bitumen 9.5mm Stone, laid compacted, to falls	m2	1,925	
	<u>Paintwork</u>			
	<u>100mm White luminous painted safety line on concrete surfaces as per Prasa specification</u>			
53	100mm White solid line	m	550	
	<u>Platform marking in English and Zulu – painted with "Plascon" or other equally approved road marking paint on asphalt surfaces – colour yellow - font to be Arial</u>			
54	Platform marking to write as "NO STANDING BEYOND THE YELLOW LINE" overall size 4620 x 200mm high	No	30	
55	Platform marking to write as "IMA NGEMUVA KOLAYINI OPHUZI" overall size 3580 x 200mm high	No	30	
56	Covid 19 social distancing platform marking to write as 200mm diameter circular line of 50mm wide solid line	No	460	
	<u>Platform Furnitures, etc.</u>			
	<u>Galvanised and polyurethane painted platform bench, colour mid grey, set into concrete bed including saw cutting existing premix / concrete surfaces, excavations, concrete base, cart away excavated materials, etc. all in accordance to Prasa Specifications (Code: M04)</u>			
57	Back-to-back sides bench 1800mm long with straight leg	No	5	
	Carried Forward			R
	Section No. 11			
	Bill No. 1			
	External Works			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
	<p><u>"Wilson Stone" or other equally approved steel little swing bin size 400mm diameter x 750mm high with steel ash tray galvanised with polyurethane paint fixed on concrete surfaces with chemical anchor bolts as per supplier recommendation</u></p>		
58	Steel little swing bin size 400mm diameter x 750mm high	No	5
	<p><u>Budgetary Allowances</u></p> <p><u>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</u></p>		
59	Allow an amount of R25,000.00 for removal of existing platform services & furnitures, light poles, signage boards, etc., amount to be utilized at the discretion of the Principal Agent.		Item
			25,000.00
Carried to Final Summary			R
Section No. 11			
Bill No. 1			
External Works			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 12</u>				
<u>BILL NO. 1</u>				
<u>EARTHWORKS</u>				
<u>PREAMBLES</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>Nature of ground</u>				
<p>Tenderers must acquaint themselves with the nature of the material to be excavated and also refer to the attached geotechnical investigation report annexed to the Bills of Quantities.</p>				
<u>Carting away of excavated material</u>				
<p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p>				
<u>Excavation for working space in rock</u>				
<p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over"bulk excavation or trench and hole excavation as the case may be</p>				
<u>Filling</u>				
<p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.</p>				
Carried Forward				R
Section No. 12 Bill No. 1 Earthworks				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Testing</u>				
Prices for filling are to include for all necessary density tests in accordance with SABS 1200D				
Prices for filling are to include for all necessary density tests in accordance with SABS 1200D				
<u>RESTRICTIVE EXCAVATIONS</u>				
<u>Restrictive excavations in earth not exceeding 2m deep</u>				
1	Trenches	m3	17	
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
2	Reduced levels under floors	m3	5	
3	Edge thickening	m3	0.1	
<u>Extra over trench and hole excavations in earth for excavation in</u>				
4	Intermediate material	m3	2	
<u>Extra over all excavations for carting away</u>				
5	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	16	
<u>Risk of collapse of excavations</u>				
6	Sides of trench and hole excavations not exceeding 1,5m deep	m2	48	
<u>Keeping excavations free of water</u>				
7	Keeping excavations free of all water other than subterranean water		Item	
Carried Forward				R
Section No. 12 Bill No. 1 Earthworks				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density.</u>			
8	Backfilling to trenches, holes, etc.	m3	6
<u>Earth filling supplied by the contractor, compacted to 98% Mod. AASHTO density</u>			
9	Under floors of G5 material in accordance with SABS 1200 DM and compacted to 95% Mod. AASHTO density	m3	2
10	Restricted filling under strip footings, etc. of G5 material in accordance with SABS 1200 DM and compacted to 95% Mod. AASHTO density	m3	3
<u>Compaction of surfaces</u>			
11	Compaction of ground surface under strip footings, etc. including grading, levelling and scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod. AASHTO density	m2	11
12	Compaction of ground surface under surface beds, etc. including grading, levelling and scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod. AASHTO density	m2	15
<u>Prescribed density tests on filling</u>			
13	Modified AASHTO Density tests	No	2
<u>SOIL POISONING</u>			
<u>brand of anti-termite soil poison applied by a registered Pest Control company and guaranteed against termite infestation for ten years</u>			
14	Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc. filling in furrows and ramming	m2	15
15	To bottoms and sides of trenches, etc.	m2	59
Carried Forward to Summary of Section No. 12			R
Section No. 12			
Bill No. 1			
Earthworks			

Item No	Unit	Quantity	Rate	Amount
BILL NO. 2				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Cost of tests</u>				
<p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Engineer. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Engineer. (Test cubes are measured separately)</p>				
<u>Breeze concrete</u>				
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>				
<u>Lightweight concrete</u>				
<p>Lightweight concrete shall have a density of 600kg/m3 for the top 50mm and 400kg/m3 for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm</p>				
Carried Forward			R	
<p>Section No. 12 Bill No. 2 Concrete, Formwork & Reinforcement</p>				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward			R
<p><u>Formwork</u></p> <p>Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p>Formwork to soffits of solid, etc. shall be deemed to be slabs not exceeding 250mm thick unless otherwise described and propping not exceeding 3,5m high unless otherwise stated. Formwork to walls and columns is not exceeding 3,5m high above bearing level unless otherwise stated.</p>			
Carried Forward			R
<p>Section No. 12</p> <p>Bill No. 2</p> <p>Concrete, Formwork & Reinforcement</p>			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
<p><u>Polished Concrete:</u></p> <p>It must be noted that where polished concrete finishes are required, the pouring and polishing of such concrete should be done by the same specialist contractor.</p> <p>The Contractor is to allow for sufficient and adequate protection of all concrete surfaces which are to have a polished finish surface.</p> <p>To achieve the optimum aesthetic finish to the floors, the casting and finishing of such concrete in connection with the laying process is of extreme importance, requiring a high degree of accuracy in placing. When grinding, the top surface of the concrete is exposed and any defects such as cracks, pores and 'gumboot marks' that originated during casting will become evident and will not be accepted and it will be required that such defects are corrected to the complete satisfaction of the Architect.</p> <p>Place concrete to a FM2 tolerance using a bull float. Separation of aggregate from walking in the green concrete is to be prevented and avoided.</p> <p>Saw cutting where required is to be done in squares to minimise the risk of shrinkage cracks and shall be done timeously within 12 hours of placing the concrete.</p> <p>During the grinding and polishing process all depressions and imperfections must be corrected and repaired to the satisfaction of the Architect.</p> <p>During grinding and polishing the required silicate densifier and stain resistant products shall be applied in accordance with the manufacturer's specifications.</p> <p>A sample panel of the polished finish is to be provided for the Architect's approval prior to any work commencing.</p>				
<p><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p>				
<p><u>10MPa/19mm concrete</u></p>				
1	Surface blinding under footings and bases	m3	1	
Carried Forward				
<p>Section No. 12 Bill No. 2 Concrete, Formwork & Reinforcement</p>				
			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
	<u>25MPa/19mm concrete</u>				
2	Strip footings	m3	3		
3	Edge thickening	m3	0.1		
4	Surface beds on waterproofing	m3	2		
	<u>TEST CUBES</u>				
5	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2		
	<u>CONCRETE SUNDRIES</u>				
	<u>Finishing top surfaces of concrete smooth with a wood float</u>				
6	Surface beds, slabs, etc,	m2	15		
	<u>FORMWORK</u>				
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>				
	<u>Smooth formwork to sides</u>				
7	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	16		
	<u>MOVEMENT JOINTS ETC</u>				
	<u>Expansion joints with 12mm bitumen impregnated softboard between vertical concrete surfaces, including necessary formwork</u>				
8	12mm Joints not exceeding 300mm high	m	16		
	<u>REINFORCEMENT (PROVISIONAL)</u>				
	<u>High tensile steel reinforcement to structural concrete work</u>				
9	Bars of various diameters	t	0.36		
	Carried Forward			R	
	Section No. 12				
	Bill No. 2				
	Concrete, Formwork & Reinforcement				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
	<u>Fabric reinforcement</u>				
10	Type ref. 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	15		
Carried Forward to Summary of Section No. 12				R	
Section No. 12					
Bill No. 2					
Concrete, Formwork & Reinforcement					

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <p><u>PREAMBLES</u></p> <p>The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>SAMPLES</u></p> <p>Samples of masonry building units to be provided before construction commences</p> <p><u>SIZES IN DESCRIPTIONS</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>HOLLOW WALLS</u></p> <p>Descriptions of hollow walls shall be deemed to include every fifth perpend of the bottom course of the external skin open as a weep hole</p> <p><u>BAGGED AND SEALED WALLS</u></p> <p>User Note: The following preamble generally applies for works in hot and humid coastal areas.</p> <p>Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating.</p>				
<p style="text-align: right;">Carried Forward</p> <p>Section No. 12 Bill No. 3 Masonry</p>			R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward					R
<u>FACE BRICKS</u>					
Bricks shall be ordered timeously to obtain uniformity in size and colour.					
All facebrick work is to be protected from other finishing trades during the construction period.					
All interior face brickwork is to receive two coats water based silicone sealant at completion including preparatory work as per manufacturer's instructions.					
<u>POINTING</u>					
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing etc.					
<u>FOUNDATIONS (PROVISIONAL)</u>					
<u>Brickwork of NFX bricks in class II mortar</u>					
1	One brick walls	m2	14		
<u>SUPERSTRUCTURE</u>					
<u>Brickwork of NFX bricks in class II mortar</u>					
2	One brick walls	m2	34		
<u>BRICKWORK SUNDRIES</u>					
<u>2.5mm Galvanised brickwork reinforcement</u>					
3	155mm Wide reinforcement built in horizontally	m	133		
<u>Bagging of 1:3 cement and sand mixture</u>					
4	On brick walls, piers, etc	m2	34		
<u>FACE BRICKWORK</u>					
<u>"Corobrick Firelight Satin FBX The Black Brick" or other equally approved face bricks pointed with tinted recessed horizontal and vertical joints</u>					
5	Extra over brickwork for face brickwork in foundations (Provisional)	m2	4		
Carried Forward					R
Section No. 12 Bill No. 3 Masonry					

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

	Brought Forward			R	
6	Extra over brickwork for face brickwork	m2	34		
7	Extra over brickwork for brick-on-header course	m	16		
Carried Forward to Summary of Section No. 12				R	
Section No. 12					
Bill No. 3					
Masonry					

Item No	Unit	Quantity	Rate	Amount
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
Tenderers are advised to refer to the Model Preambles for trades before pricing these provisional Bill of Quantities.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Waterproofing</u>				
All new waterproofing, etc shall be guaranteed against leaks for a period of 10 (ten) years calculated from the date of issue of Practical Completion Certificate by the Project Manager. The guarantee shall be to the satisfaction of the Employer and shall be capable of cession to the Employer. The guarantee shall be submitted to the Project Manager prior to the commencement of the waterproofing works comprising this contract.				
<u>WATERPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 Micron "Consol Plastics Brikgrip DPC" embossed damp proof course.</u>				
1	In walls	m2	4	
<u>One layer 250 micron " Consol Plastic Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
2	Under surface beds	m2	15	
<u>Two coats brixal bitumen emulsion waterproof coating</u>				
3	On bagged brick walls	m2	34	
<u>SEALING STRIPS, JOINT SEALANTS, ETC.</u>				
<u>Sika or other two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
4	12 x 10mm In expansion joints in floors including raking out expansion joints filler as necessary.	m	16	
Carried Forward to Summary of Section No. 12				
Section No. 12				
Bill No. 4				
Waterproofing				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 5</u> <u>METALWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>GALVANISED STEEL GATES, SCREENS, ETC</u> <u>Hot dipped galvanised steel gates</u>				
1	Double gate size 1500 x 2100mm high with 19mm dia. tubular steel infills @ 100mm centres welded to frames and 40 x 6mm horizontal support with and including fame 38 x 60 x 3mm tubular gate surround concealed fixed wall with raw bolts (A.G1). Tenderers are referred to Architects drawings annexed to these Bills of Quantities for the full description of the gate	No	1		
	Carried Forward to Summary of Section No. 12 Section No. 12 Bill No. 5 Metalwork			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 7</u>				
	<u>PLUMBING AND DRAINAGE</u>				
	<u>PREAMBLES</u>				
	The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item				
	<u>SOIL DRAINAGE</u>				
	<u>Alterations to existing drains, manholes etc:</u>				
1	Break through one side of precast concrete manhole for and connect up new 110mm Class 34 uPVC pipe (elsewhere measured) and make good all round including new channels, benching, etc.	No	1		
	<u>uPVC pipes in class C bedding:</u>				
2	110mm Pipes vertically or ramped to cleaning eyes, etc. (no excavation)	m	1		
3	110mm Pipes laid in and including trenches not exceeding 1m deep	m	25		
	<u>Extra over uPVC pipes for fittings:</u>				
4	110mm Bend	No	4		
5	110mm Access junction	No	1		
6	110mm Rodding eye with cast iron cover and frame	No	1		
	<u>SANITARY FITTINGS</u>				
	<u>Floor traps</u>				
7	Stainless steel floor trap as herbish HB 200 (H) NW100 or equally approved connected to sewer line	No	1		
	Carried Forward			R	
	Section No. 12 Bill No. 7 Plumbing & Drainage				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>TAPS, VALVES, ETC.</u>			
	Taps, valves, etc. jointed to copper pipes are to include brass connectors, adaptors etc. Installation and fixings to be as per manufacturers specifications and SANS 1808-9 compliant.			
8	22mm Ball-O- stop valves	No	1	
	<u>SANITARY PLUMBING</u>			
	<u>uPVC pipes cast into concrete slabs, fixed to soffit and walls, or chased into walls, chased into concrete, etc. in accordance with manufacturers specifications</u>			
9	110mm Pipes	m	5	
	<u>Extra over uPVC pipes for:</u>			
10	110mm Bend	No	1	
11	110mm Access bend	No	1	
	<u>TAPS, VALVES, ETC.</u>			
	<u>"Cobra Watertech" or equally approved</u>			
12	3/4" Rough brass hose bib tap 209	No	1	
	<u>DOMESTIC WATER SUPPLIES</u>			
	<u>HDPE class 12 pipes in ground</u>			
13	32mm Pipes laid in trenches including excavations, risk of collapse, backfilling, etc.	m	25	
	<u>Extra over HDPE pipes for fittings:</u>			
14	32mm Elbow	No	4	
15	32mm Tee	No	1	
	Carried Forward			R
	Section No. 12 Bill No. 7 Plumbing & Drainage			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<p><u>Geberit Mepla or other equally approved pipes fixed to soffit and walls, or chased into walls, chased into concrete, etc. in accordance with manufacturers specifications:</u></p> <p>All piping embedded into concrete or chased into walls to be twice wrapped in strong approved building paper.</p> <p>Rates for surface mounted copper pipe shall be deemed to include all fixtures and fittings for pipes fixed to walls, in chases, and in ceilings.</p>			
16	20mm Pipes	m	2
<p><u>Extra over Mepla pipes for fittings:</u></p>			
17	20mm Bend	No	2
<p><u>Extra over Mepla pipes for brass compression fittings:</u></p>			
18	22mm Wallplate elbow	No	1
19	22mm coupling	No	1
<p><u>TESTING</u></p>			
20	Allow for testing the whole of the Stormwater drainage, Sewer drainage, Plumbing, Water and Fire supplies and all fittings to the satisfaction of the Architect, Engineer and Local Authorities. All defective work is to be taken out and replaced at the contractor's expense and the whole re-tested until acceptable	Item	
<p>Carried Forward to Summary of Section No. 12</p> <p>Section No. 12 Bill No. 7 Plumbing & Drainage</p>			R

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No		Unit	Quantity	Rate	Amount
	<u>BILL NO. 8</u> <u>PAINTWORK</u> <u>PREAMBLES</u> The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", "Supplementary Preambles" and "Supplementary Specifications" to this contract for the full requirements of each scheduled item <u>SUPPLEMENTARY PREAMBLES</u> <u>PREPARATORY WORK TO EXISTING WORK</u> <u>Previously painted plastered surfaces</u> Surfaces shall be thoroughly water pressure cleaned and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished to match existing surfaces. <u>PAINTWORK, ETC TO NEW SURFACES</u> <u>ON EXTERNAL FLOATED PLASTER SURFACES</u> <u>"Plascon" or other equally approved alkali resistant primer and two coats "Micatex" emulsion paint for exterior use</u>				
1	On walls	m2	34		
	Carried Forward to Summary of Section No. 12 Section No. 12 Bill No. 8 Paintwork			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

SECTION SUMMARY - Refuse Area			Page No	Amount
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3	Masonry	257		
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7	Plumbing & Drainage	263		
8	Paintwork	264		
Carried to Final Summary			R	
Section No. 12				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 13</u>				
	<u>BILL NO. 1</u>				
	<u>Electrical Installation</u>				
	<u>Electrical Cables and cable ways</u>				
	<u>Cables</u>				
1	150 mm² 4 core Alu PVC SWA PVC ECC cable from Main Non Essential kiosk to DB1-NE	m	75		
2	Extra on last to install in sleeves and manholes	m	75		
3	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
4	35 mm² 4 core Alu PVC SWA PVC ECC cable from DB1-NE to DB2-NE	m	50		
5	Extra on last to install in sleeves and manholes	m	50		
6	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
7	25 mm² 4 core Alu PVC SWA PVC ECC cable from DB1-NE to DB-3NE	m	75		
8	Extra on last to install on cable ladder at 4 000 AFFL	m	75		
9	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
10	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
11	16 mm² 4 core Alu PVC SWA PVC ECC cable from DB1-E to DB2-E	m	58		
12	Extra on last to install in sleeves and manholes	m	58		
13	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
	Carried Forward				
	Section No. 13 Bill No. 1 Electrical Installation			R	

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
14	25 mm ² 4 core Alu PVC SWA PVC ECC cable from DB1-NE to DB-3E	m	75		
15	Extra on last to install on cable ladder at 4 000 AFFL	m	75		
16	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
17	25 mm ² 4 core Alu PVC SWA PVC ECC cable from DB1-E to DB-light - E	m	50		
18	Extra on last to install in sleeves and manholes	m	50		
19	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
20	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	4		
21	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	2		
22	10 mm ² 4 core Alu PVC SWA PVC ECC cable from Main Non Essential Metering Panel to External lighting	m	450		
23	Extra on last to install in sleeves and manholes	m	450		
24	Extra for terminating and connecting end including supply of CCG cable gland and lugs	No	25		
25	Extra over cabling exposed on soffits and walls to be covered with hot dipped galvanised 30 x 30 x 5mm thick angle section steel with and including pre-drilled fixing lugs at 500mm centres with and including vandal proof plugs	m	450		
	<u>Cables ladders and trunking</u>				
26	Supply and install 400 mm wide electro galvanised cable ladder (medium duty), fixed to trapeze hangers inclusive of splices, bends, elbows, T pieces etc.	m	100		
27	Supply and install 200 mm wide electro galvanised cable ladder (medium duty), fixed to trapeze hangers inclusive of splices, bends, elbows, T pieces etc. as shown on layout drawings mounted at 4 000 mm AFFL	m	100		
	Carried Forward			R	
	Section No. 13 Bill No. 1 Electrical Installation				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
28	Supply and install P9000 trunking suspended from purlins with bracket hanger inclusive of hanger every inclusive of splices, bends, elbows, T pieces etc. as shown on layout drawings mounted at 4 000 mm AFFL	m	300		
	<u>Trenches on platform and to electrical room</u>				
29	Trenching, concrete casting, backfilling, etc in earth including supply and fitting 4 x 110mm nextube or other equally approved	m	50		
30	Trenching, concrete casting, backfilling, etc in tar or paving including fitting 4 x 110mm nextube or other equally approved	m	600		
31	Supply and install 600 x 600 manhole to specification complete with heavy duty manhole vandalproof cover	No	16		
	<u>Electrical Distribution boards</u>				
	The following boards supplied by 'EDS' Switchboard Manufacturers or other equally approved				
32	Main Electrical Kiosk	No	1		
33	Distribution board DB-3/3E	No	1		
34	Distribution board Lighting Sub-DB	No	1		
	<u>Light Fittings</u>				
	Supply & delivery of the following luminaires as per ; Prasa Electrical Specifications				
35	Type AE (Vandalproof bulkhead with 15min battery)	No	40		
36	Extra over above for hot dipped galvanised vandal proof cage bolted to walls or soffits	No	40		
37	Type BE (LED 600 x 600 recessed panel light)	No	12		
38	Extra over above for hot dipped galvanised vandal proof cage bolted to walls or soffits	No	12		
39	Type FE (Corrosion & vandalproof linear fitting)	No	24		
40	Extra over above for hot dipped galvanised vandal proof cage bolted to walls or soffits	No	24		
	Carried Forward			R	
	Section No. 13 Bill No. 1 Electrical Installation				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Small power</u>				
Supply and install the following:-				
41	25mm 'Bosal' or other equally approved conduit surface mounted in ceiling void or fixed to external trusses	m	550	
42	25mm PVC conduit built into brickwork or cast in concrete	m	500	
43	2.5mm Cu PVC wire pulled into conduit or installed in power skirting/trunking	m	3,500	
44	'Crabtree' or other equally approved 16A dedicated red/blue 3 pin switched socket outlet in power skirting inclusive of cover	No	15	
45	'Crabtree' or other equally approved 16A 3 pin switched socket outlet in power skirting	No	15	
46	Cut 80 x 40 slot in back of power skirting, trim edge and fit grommet	No	6	
47	'Crabtree' or other equally approved 16 A dedicated red/blue 3 pin switched socket outlet in conduit box	No	1	
48	'Crabtree' or other equally approved 16 A 3 pin switched socket outlet in conduit box	No	15	
49	'Crabtree' or other equally approved 16 A 3 pin double switched socket outlet in 100 x 100 conduit box	No	20	
50	'Crabtree' or other equally approved 16 A 3 pin universal double switched socket outlet in 100 x 100 conduit box	No	10	
51	100 x 50 surface mounted galvanised steel conduit box	No	25	
52	100 x 100 surface mounted galvanised steel conduit box	No	35	
53	2.5 mm ² 2 core and earth surfix installed in ceiling void	m	200	
54	Terminate above surfix	No	20	
55	'Crabtree' or other equally approved 20 A double pole isolator in surface 'Bosal' or other equally approved conduit box for HWC	No	2	
Carried Forward				R
Section No. 13 Bill No. 1 Electrical Installation				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
56	'Crabtree' or other equally approved 20 A double pole flush mounted isolator for A/C	No	6		
57	Round 65 mm dia. steel conduit box built into brickwork	No	6		
	'Power Comm' or other equally approved galvanised flush cluster box complete with dividers;				
58	9-way cluster conduit box	No	4		
59	9-way cover plate to cluster box complete with yoke	No	4		
	Switches, outlets etc complete with engraved cover plate as required, fixed to cluster box;				
60	16A three pin normal switched socket outlet	No	4		
61	16A three pin dedicated switched socket outlet	No	4		
62	RJ11 telephone outlet	No	4		
63	RJ45 data outlet	No	4		
64	Blank cover plate	No	4		
65	RF/TV outlet	No	4		
66	Euro switched socket outlet	No	4		
	<u>Lighting</u>				
	Supply and install the following:-				
67	25 mm 'Bosal' or other equally approved conduit fixed to trusses	m	350		
68	2.5 mm ² Cu PVC wire pulled into conduit and trunking	m	1,250		
69	2.5 mm ² 2 core surfix	m	250		
70	Terminate 2.5 mm ² 2 core surfix	No	25		
71	1 No. 5 amp 3 pin socket outlets mounted in 65 mm dia. PVC conduit box / on trunking	No	58		
72	100 x 100/50 galvanised steel conduit box installed in ceiling void	No	10		
	Carried Forward			R	
	Section No. 13				
	Bill No. 1				
	Electrical Installation				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
73	65 mm dia. Bosal conduit box installed	No	20		
74	'20 amp double pole isolator mounted 100 x 100 conduit box for toilet vent fan	No	6		
75	'20 amp three phase isolator mounted 100 x 100 conduit box extractor	No	6		
76	2No. 1 lever 1 way + dimmer 16 Amp 'Crabtree' or other equally approved light switch with steel cover	No	2		
77	1 lever 1 way 16 Amp 'Crabtree' or other equally approved light switch with white steel cover	No	5		
	Allow for installation of the following luminaires with lamps wrapped in plastic initially and then the removal of the plastic and installation of the diffuser at a later stage				
78	Type AE	No	6		
79	Type BE	No	2		
80	Type FE (Corrosion proof fluorescent fitting with battery)	No	1		
	<u>Fire and security</u>				
	Supply and install the following:-				
81	25 mm ² 'Bosal' or other equally approved conduit fixed to surface to concrete soffit or built into brickwork	m	250		
82	100 x 100 galvanised steel surface conduit box	No	15		
83	2.5 mm ² PVC copper wire installed in conduit as draw wire	m	250		
	<u>Telephone and data</u>				
	Supply and install the following:-				
84	25 mm dia. 'Bosal' or other equally approved conduit built into brickwork or in ceiling void	m	300		
85	Galvanised draw wire pulled into conduit	m	300		
86	Blank cover for telephone/data RJ11/RJ45 outlet in power skirting	No	10		
	Carried Forward			R	
	Section No. 13 Bill No. 1 Electrical Installation				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
87	Blank cover for 100 x 100/50 conduit box	No	10		
88	100 x 100/50 conduit box built into brickwork for power skirting entry	No	15		
89	Cut 80 x 40 slob in back of power skirting, trim edge and fit grommet	No	4		
90	'32mm 'Bosal' or other equally approved conduit built into brickwork or ceiling void	m	100		
91	'600 x 600 steel telephone JB surface mounted	No	1		
92	Earthing and bonding		Item		
93	Testing and commissioning inclusive of completing test sheet and circuit cards as specified		Item		
	Supply and install the following:-				
94	20 mm flexible PVC conduit	m	150		
95	25 mm flexible PVC conduit	m	150		
	<u>Powerskirting</u>				
96	Supply and install 3 compartment steel power skirting with matching two separate covers complete with splices etc (colour beige)	m	50		
97	Supply and install 90 deg. Internal/external bends of the same make and colour as above	No	12		
98	Supply and install blank telephone/data matching outlet cover	No	10		
99	Supply and install end caps the same make and colour as above	No	15		
	GENERAL ITEMS				
	REFER TO DRAWING				
100	Install and connect DB 1 on brickwork. Allow for protecting DB with heavy duty plastic during construction	No	1		
	Carried Forward			R	
	Section No. 13				
	Bill No. 1				
	Electrical Installation				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
101	<p>Install and connect DB 3 and lighting DB on brickwork. Allow for protecting DB with heavy duty plastic during construction</p> <p><u>External lighting</u></p> <p>Install the following luminaires with lamps;</p>	No	2	
102	Type H (Beka or other equally approved "Solarflood" combined with the OMNISTAR-MINI luminaire - installed as per manufacturer's specifications)	No	12	
<p>Carried Forward to Summary of Section No. 13</p> <p>Section No. 13 Bill No. 1 Electrical Installation</p>				R

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Item No			Quantity	Rate	Amount
	<u>BILL NO. 2</u>				
	<u>Electronic Installation</u>				
	<u>Support housing and brackets</u>				
1	Steel Header for speaker to pole, including speaker Header for top of EDB pole	No	8		
2	Full Victorian Steel Header for camera / speaker to pole	No	8		
3	Stainless steel bracket for two speaker to pole	No	6		
4	Steel Bracket for Speaker to Structure/Shelter	No	4		
5	Steel Bracket for Camera to Structure/Shelter	No	4		
6	Steel EDB Pole - L Type	No	2		
7	Steel EDB Pole - T Type	No	2		
	<u>PA systems</u>				
8	Doms	No	1		
9	DCS	No	1		
10	UIM	No	1		
11	Amps	No	1		
12	MSU	No	1		
13	SCU	No	1		
14	Platform Speakers (Horn Type)	No	26		
15	Ceiling speakers	No	5		
16	Speaker cable	m	1,400		
	<u>Access control</u>				
17	Card Readers	No	10		
18	KDM	No	2		
	Carried Forward			R	
	Section No. 13				
	Bill No. 2				
	Electronics				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
19	KDA	No	1	
20	KDR	No	1	
21	PS64 PSU	No	1	
22	Interlocking door controller (booth)	No	1	
23	Maglock	No	4	
24	Babylon Workstation	No	1	
25	Door Junction Box	No	5	
26	Equipment Junction Box (field note)	No	1	
27	Roller Shutter / Gate Monitor	No	2	
28	BGU for emergency exit (Green)	No	3	
29	2 pair cable	m	130	
30	4 pair cable	m	110	
31	8 pair cable	m	525	
32	Alarm Siren and Strobe	No	3	
33	Alarm Keypad	No	2	
34	360 Degree Ceiling Mounted IR Detector	No	10	
35	Corner PIR wall mounted	No	2	
36	Panic Button	No	4	
37	Door Monitor	No	2	
38	Six door intercom system	No	1	
39	Intercom door station	No	2	
40	4 pair cable (Intercom)	m	50	
Carried Forward				R
Section No. 13 Bill No. 2 Electronics				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

		Brought Forward		R
	<u>Fire control</u>			
41	8 Zone Fire Panel	No	1	
42	Optical smoke detectors	No	30	
43	Optical heat detectors	No	4	
44	LED Minidisk remote indicators	No	4	
45	Loop Sounder	No	2	
46	Line Interface A/C Cutoff	No	1	
47	Manual Call Point (Red BGU)	No	3	
48	PH 120 1,0mm Fire rated cable	m	380	
49	Fire Beacon and Sounder Indoor	No	1	
50	Fire Bell and Sounder	No	3	
51	Fire Bell External	No	3	
	<u>Cabling</u>			
	<u>Equipment rack componenets</u>			
52	3 kVA UPS	No	1	
53	6 kVA UPS	No	2	
54	10 KVA CVT	No	1	
55	Distribution Unit incl circuit breakers, surge arrestors & lightning arrestors) (MSU 3.1.6)	No	3	
56	Distribution Unit incl circuit breakers, surge arrestors & lightning arrestors) in Racks	No	3	
57	24 Port Fibre Switch (7.1.6)	No	1	
58	24 Port POE Switch (7.1.7)	No	1	
59	8 Port Switch (In Kiosks at Platform)	No	3	
60	KVM Switch	No	1	
		Carried Forward		R
	Section No. 13			
	Bill No. 2			
	Electronics			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
61	Keyboard and Monitor Drawer	No	1	
62	Cat 5 Patchleads (1m)	No	24	
63	Cat 5 Cables (UTP all colours)	m	2,950	
64	2,5mm Surfix	m	230	
65	4mm Surfix	m	200	
66	Patch Panel (Fibre) Equipment Room	No	3	
67	43U, 19" Rack	No	2	
<u>Wire ways</u>				
68	25mm PVC	m	200	
69	50mm PVC	m	50	
70	25mm bosal	m	90	
71	50mm bosal	m	100	
72	P8000 76 x 76mm	m	50	
73	P9000 76 x 76mm	m	50	
74	CLT6 Truncking	m	100	
75	150 mm Wire Mesh Cable Basket	m	98	
76	PVC Trunking 16 x 25mm	m	50	
Carried Forward to Summary of Section No. 13				R
Section No. 13				
Bill No. 2				
Electronics				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Bill No	SECTION SUMMARY - Electrical Installation		Page No			Amount
1	Electrical Installation		273			
2	Electronics		277			
Section No. 13		Carried to Final Summary			R	

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 14</u>				
<u>BILL NO. 1</u>				
<u>MECHANICAL INSTALLATION</u>				
For the supply, delivery, installation and commissioning the following Variable Refrigerant Flow system ('Daikin' series Heat Pump or other equally approved), complete with condensing and evaporator units, all with electrical connection to isolator, refrigeration- and drain piping, electrical control wiring, brackets, supports and all necessary accessories, as per the specification and manufacturer's recommendation. Condensing unit to come complete with LG Ocean Blackfin treatment				
<u>Air-conditioning and ventilation installation</u>				
<u>For the supply, delivery, installation, connecting & commissioning of the complete outside condensing/compressor units</u>				
1	RXYSQ4T8V, 'Daikin' or other equally approved Cooling capacity - 11,9 kW Heating capacity - 9,2 kW SEER - 7 SCOP - 4,4	No	1	
<u>For the supply, delivery, installation, connecting & commissioning of the complete outside condensing/compressor units</u>				
2	FXAQ25A, 'Daikin' or other equally approved Wall mounted - Cooling capacity 2,8kW, Heating capacity 10 kW and airflow 156l/s	No	1	
<u>Refnet joints and multi connection piping kit (for a two-pipe system) and reducers as per the manufacturer's specification and recommendations, supplied and installed complete with insulation.</u>				
3	KHRQ22M20T, Daikin or other approved	No	1	
Carried Forward				R
Section No. 14 Bill No. 1 Hvac				

REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward			R
<u>For the complete supply, delivery and installation of the insulated refrigerant piping, including bends, joints, T's, supports, brackets, fittings in accordance to the specification and manufacturer's recommendations, between indoor and outdoor unit(s) and supports, as per engineers drawings.</u>			
4	Piping Liquid - 6,35mm (1/4 inch)	m	3
5	Piping Liquid - 9,52mm (3/8 inch)	m	20
6	Piping Liquid - 12,70mm (1/2 inch)	m	3
7	Piping Gas - 12,70mm (1/2 inch)	m	3
8	Piping Gas - 15,88mm (5/8 inch)	m	20
9	Piping Gas - 19,05mm (3/4 inch)	m	3
<u>For the complete supply, delivery and installation of the insulated uPVC condensate drain piping, including bends, T's, joints, supports, brackets, fittings, traps in accordance to the specification and manufacturer's recommendations, as per engineers drawings.</u>			
10	Piping drain - Ø16mm	m	20
11	Piping drain - Ø25mm	m	20
12	Piping drain - Ø32mm	m	5
<u>For the complete supply, delivery and installation of hard wired remote controllers, including control wiring, supports, brackets, fittings, in accordance to the specification and manufacturer's recommendations, as per engineers drawings.</u>			
13	Wide Wired Remote controller (Model BRC1H52W) 'Daikin' or other equally approved	No	1
14	Control wiring (two core non screened stranded wire)	m	10
15	dia 20mm PVC Conduit saddled/fixed to cable tray or building structure.	m	10
16	dia 20mm flexible Conduit for connection to equipment.	m	10
Carried Forward			R
Section No. 14 Bill No. 1 Hvac			

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
17	dia 50mm PVC round box.	No	1	
18	Writing Control Program & Commissioning		Item	
19	Additional refrigerant charge	kg	1	
<p><u>Supply, deliver, install and commission the following Direct Expansion, Inverter split type air conditioning system ('Daikin' or other equally approved), complete with condensing and evaporator units, all with electrical connection to isolator, refrigeration- and drain piping, electrical control wiring, brackets, supports, auxiliary extended drip tray at each indoor unit and all necessary accessories, as per the specification and manufacturer's recommendation.</u></p>				
20	5 kW cooling & 5,8 kW heating Wall mounted type Indoor Evaporator unit (FTXM50M/N)	No	2	
21	5 kW cooling & 5,8 kW heating Outdoor Condensing unit, complete with wall mounted bracket. (RXM50M/N) SEER - 7,33 SCOP - 4,6	No	2	
22	Diameter 6.35mm insulated refrigerant piping, installed inside trunking.	m	60	
23	Diameter 12.7mm insulated refrigerant piping, installed inside trunking.	m	60	
24	Diameter 25mm uPVC condensate drain piping, installed inside trunking.	m	60	
25	Hard wired controller	No	2	
26	(100x40)mm uPVC Trunking.	m	20	
<p><u>Coil treatment for the following equipment (Original 'Bluechem' or other equally approved)</u></p>				
27	RXYSQ4T8V, Daikin or other approved	No	1	
28	RXM50M/N, Daikin or other approved	No	2	
<p><u>Allow for delivery to site (including air suspended transport where necessary), crainage and rigging of the following units</u></p>				
Carried Forward				R
Section No. 14 Bill No. 1 Hvac				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward					R
<u>VRF System units</u>					
29	RXYSQ4T8V, 'Daikin' or other equally approved - Condensing Unit	No	1		
30	RXM50M/N, 'Daikin' or other equally approved - Condensing unit	No	2		
31	FXAQ25A, 'Daikin' or other equally approved (Wall mounted type)	No	1		
32	FTXM50M/N, 'Daikin' or other equally approved (Wall mounted type)	No	2		
<u>Supply, deliver and install the following ventilation fans complete with electrical connection to isolator or light circuit as specified, ducting, flexible connections, including hangers, supports, brackets, sound attenuators matching the fan capacities and all necessary accessories.</u>					
33	F1 - LINEO INLINE 315VO at in-line fan complete with speed controller at (237) l/s and 300 Pa, single phase/220V. 'Donkin' or other equally approved	No	1		
34	Matching Sound Attenuators.	No	2		
35	F2 - LINEO INLINE 250VO at in-line fan complete with speed controller at (75 and 113) l/s and 400 Pa, single phase/220V. 'Donkin' or other equally approved	No	2		
36	Matching Sound Attenuators.	No	4		
37	F3 - VORTICE VARIO 150/6 ARI LLS window/wall fan complete with speed controller at (86) l/s and 50 Pa, single phase/220V. 'Donkin' or other equally approved.	No	1		
38	F4 - HCDF-34-4T, wall mounted axial flame-proof fan complete with spark-proof motor @ 800 l/s and 100 Pa. fan to be complete with aluminium louvre shutter 'Donkin' or other equally approved	No	1		
<u>DUCTWORK AND FITTINGS</u>					
Carried Forward					R
Section No. 14 Bill No. 1 Hvac					

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Brought Forward				R
<u>Supply, deliver and install LOW PRESSURE galvanized externally-insulated ductwork as per the specification including fittings, reducers, radius bends, stop end, branches, tees and transformations all hangers, straps, supports, clamps and necessary accessories.</u>				
ROUND DUCTING				
Complete with fittings including hangers, clamps, brackets, nuts and bolts, etc. (including 15mm thermoflex external insulation)				
Sheet-metal Thickness for round ducting unless otherwise indicated up to 300mm dia. : 0.5mm, 301dia to 800dia : 0.6mm, 801dia to 1000dia. : 0.8mm, 1001 to 1200dia : 1.0mm, Jointing shall be beaded				
<u>Straight sections</u>				
39	Ø125	m	3	
40	Ø200	m	12	
41	Ø400	m	19	
<u>Lobster bends</u>				
42	Ø125	m	2	
43	Ø200	No	6	
44	Ø400	No	5	
<u>Reducers</u>				
45	200ø-125ø	No	6	
46	250ø-200ø	No	3	
47	400ø-200ø	No	3	
<u>End cap</u>				
48	Ø200	No	5	
49	Ø400	No	2	
Carried Forward				R
Section No. 14				
Bill No. 1				
Hvac				

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R
	<u>Flexible ducting (foil faced 50mm mineral wool)</u>			
50	Ø200	m	3	
51	Ø400	m	8	
	<u>Rectangular galvanised mild steel sheetmetal ductwork installed as per specification complete with fittings including hangers, clamps, brackets, etc.</u>			
52	Width or height not exceeding 750mm and the sum of the two adjacent sides not exceeding 1150mm	m2	6	
53	Category one fittings other than stop-ends	No	3	
54	Category one Stop End fittings	No	3	
	<u>Disc valves</u>			
55	DVS1 - Diameter 125mm Ceiling mounted disc valve for supply air ('Trox' type Z-LVS or other approved) epoxy colour coated to architect's detail. Various air flow rate.	No	1	
56	DVS2 - Diameter 200mm Ceiling mounted disc valve for supply air ('Trox' type Z-LVS or other equally approved) epoxy colour coated to architect's detail. Various air flow rate.	No	1	
57	DVE1 - Diameter 125mm Ceiling mounted disc valve for extract air ('Trox' type LVS or other equally approved) epoxy colour coated to architect's detail. Various air flow rate.	No	3	
58	DVE2 - Diameter 200mm Ceiling mounted disc valve for extract air ('Trox' type LVS or other equally approved) epoxy colour coated to architect's detail. Various air flow rate.	No	4	
	<u>Dampers</u>			
59	D1- Ø125 Circular Volume Control Damper, (manual) ('Trox' or other equally approved).	No	1	
60	D2 - Ø200 Circular Volume Control Damper, (manual) ('Trox' or other equally approved).	No	4	
	Carried Forward			R
	Section No. 14 Bill No. 1 Hvac			

**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

	Brought Forward			R	
61	D3 - Ø300 Circular Volume Control Damper, (manual) ('Trox' or other equally approved).	No	5		
62	D3 - Ø300 Circular Volume Control Damper, (manual) ('Trox' or other equally approved).	No	5		
	<u>Washable Pleated Filters</u>				
63	295x295x50mm Washable primary pleated filters ('Trox' type WP-PS/ 295x295x50 or other equally approved)	No	1		
	<u>Weather Louvres</u>				
64	WL1 - (300x300)mm Weather Louvre ('Trox' AWG or other equally approved) complete with wire mesh screen epoxy colour coated finish to Engineers detail	No	1		
65	WL2 - (400x450)mm Weather Louvre ('Trox' AWG or other equally approved) complete with wire mesh screen epoxy colour coated finish to Engineers detail	No	1		
66	WL3 - (300x200)mm Weather Louvre ('Trox' AWG or other equally approved) complete with wire mesh screen epoxy colour coated finish to Engineers detail	No	1		
	<u>Grilles (return - & extract air)</u>				
67	RAG1 - (600x600)mm Return air grille ('Trox' type PE or other equally approved), made from aluminium, complete with OBD, spigot connection to ducting, complete with filter frame, epoxy colour coated finish to architect's detail.	No	1		
	<u>Controls</u>				
68	For the supply, delivery and installation of the new main control panel (IP 54 sheet metal enclosure) complete with Fuses, Warning lights & alarms, Toggle switches, Timers, Fire System interface interlocking, control wiring, conduit, saddles, supports and brackets, and all necessary fittings and accessories per the manufacturer's recommendation and the Specification. Panels to be weather proof.	No	1		
	Panel 1 - VRF plant				
	VRF condensing unit				
	Carried Forward			R	
	Section No. 14				
	Bill No. 1				
	Hvac				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

Brought Forward				R
	Panel 2 - Offices			
	Fans and indoor fan coil units			
69	Control wiring (two core non screened stranded wire)	m	50	
70	dia 20mm PVC Conduit saddled/fixed to cable tray or building structure.	m	50	
71	dia 20mm flexible Conduit for connection to equipment.	m	50	
72	dia 50mm PVC round box.	No	12	
73	Writing Control Program & Commissioning		Item	
74	Supply, deliver and install (250x100)mm galvanized trunking, with removable covers, including brackets, supports and all necessary accessories, to install refrigeration piping in. (Provisional)	m	40	
75	Supply, deliver and install (200x100)mm galvanized trunking, with removable covers, including brackets, supports and all necessary accessories, to install refrigeration piping in. (Provisional)	m	40	
76	Supply, deliver and install 200mm wide wire mesh cable basket (Cabstrut or other equally approved), including brackets, supports and all necessary accessories, to install refrigeration piping on. (Provisional)	m	40	
77	Supply, deliver and install 100mm wide wire mesh cable basket (Cabstrut or other equally approved), including brackets, supports and all necessary accessories, to install refrigeration piping on. (Provisional)	m	40	
78	Supply and install (41x41)mm Unistrut channel (Cabstrut or other equally approved) as brackets and supports for the air conditioning units, ducting and cable trays to the building roof and wall structure, complete with necessary fittings and accessories as per manufacturer's recommendation. (Provisional)	m	25	
Carried to Final Summary				R
Section No. 14				
Bill No. 1				
Hvac				

REFURBISHMENT, ALTERATIONS AND ADDITIONS AT CLUSTER 6: KAPTEINSKLIP STATION

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**REFURBISHMENT, ALTERATIONS AND ADDITIONS
AT CLUSTER 6: KAPTEINSKLIP STATION**

Section No		Page No	Amount	
FINAL SUMMARY				
1	Preliminaries	42		
2	Ticket Office (A)	93		
3	Waiting Area (B)	106		
4	Pedestrian Bridge (C & F)	122		
5	Waiting Area (D)	135		
6	Waiting Area and Ablutions (E)	166		
7	Waiting Area (G)	180		
8	Waiting Area (H)	194		
9	Protection Services (I)	226		
10	Platform 1	236		
11	Platform 2	246		
12	Refuse Area	265		
13	Electrical Installation	278		
14	Mechanical Installation	286		
15	Fire Installation	287		
Sub - Total			R	
Sub - Total			R	
Add Contingency: Sum of R 750 000.00 (Seven Hundred and Fifty Thousand Rand)		Item		750,000.00
Sub-Total			R	
Value Added Tax (15%)			R	
Carried to Form of Tender			R	