



AIRPORTS COMPANY
SOUTH AFRICA

EAST LONDON AIRPORT

TENDER NO.: ELA7943/2025/RFP

UPGRADING AND MODIFICATION OF HVAC SYSTEMS

CONTRACT

VOLUME 2



AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

PROJECT NAME AND NUMBER: ELA7943/2025/RFP

TITLE OF PROJECT: UPGRADING AND MODIFICATION OF HVAC SYSTEMS AT EAST LONDON AIRPORT

NEC 3: ENGINEERING AND CONSTRUCTION CONTRACT (ECC)

Between AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Applicable at East London Airport

(Registration Number : 1993/004149/30)

and

(Registration Number : _____)

for **UPGRADING AND MODIFICATION OF HVAC SYSTEMS AT EAST LONDON AIRPORT**

Contents:	No of pages
Part C1 Agreements & Contract Data	[24]
Part C2 Pricing Data	[6]
Part C3 Scope of Works	[4]
Annexure A Occupational Health and Safety Agreement	[4]
Annexure B Environmental Terms and Conditions - EMS 048	[2]



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Part C1: Agreements and Contract Data

C1.1: Form of Offer and Acceptance

OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of **UPGRADING AND MODIFICATION OF HVAC SYSTEMS AT EAST LONDON AIRPORT**

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the **Contractor** under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(in words)

..... Rands;

(in figures) R.....

THE OFFERED PRICES ARE AS STATED IN THE PRICING SCHEDULE

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the **Contractor** in the conditions of contract identified in the Contract Data.

Signature(s)

Name(s)

Capacity

Date:

For the Bidder:

.....
(Insert name and address of organisation)

.....
Date

Name & signature of witness



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ACCEPTANCE

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the **Contractor** the amount due in accordance with the conditions of contract identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2 Pricing Data
- Part C3 Scope of Work: Works Information
- Part C4 Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now **Contractor**) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

Name(s)

Capacity

Date:

for the Employer

Airports Company South Africa SOC Limited,
The Maples, River Woods, 24 Johnson Road.
Bedfordview,
Gauteng,
2008

(Insert name and address of organisation)

Name &
signature of
witness

Date



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Schedule of Deviations

1 Subject .

.....
Details
.....
.....
.....

2 Subject

Details
.....
.....
.....

3 Subject

Details
.....
.....
.....

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

For the Employer

For the Bidder

Signature (s)

Name (s)

Capacity

Name and Address **Airports Company South Africa SOC Limited**

Name & Signature of witness *(Insert name and address of organisation)*

Date

.....

.....

.....

(Insert name and address of organisation)

.....

.....



Part C1.2a Contract Data

Part one – Data provided by the *Employer*

The Conditions of contract are selected from the NEC3 Engineering and Construction Contract, April 2013.

Each item of data given below is cross-referenced to the NEC3 Engineering Construction Contract which requires it.

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for Main Option	
	Main Option	B: Priced contract with Bill of Quantities
	Dispute resolution Option	W1: Dispute resolution procedure
	Secondary Options (incorporating amendments)	X2: Changes in the law X7: Delay damages X13: Performance Bond X16: Retention X18: Limitation of liability Z: Additional conditions of contract of the NEC3 Engineering and Construction Contract, April 2013
10.1	The <i>Employer</i> is (Name)	Airports Company South Africa SOC Limited, Applicable East London Airport
	Address	Airports Company South Africa SOC Limited East London Airport 66 Settlers Way, East London, Eastern Cape 5201
	Telephone	+27 43 706 0306
	Fax	+27 43 706 0313
10.1	The <i>Project Manager</i> is	Samkelo Luyenge
	Address	East London Airport 66 Settlers Way, East London, 5201
	Telephone	+27 43 706 0358
	E-mail address	Sam.Luyenge@airports.co.za



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10.1	The <i>Supervisor</i> is	Carifro Consulting Engineers
	Address	100 Mangold Street Newton Park Gqeberha Eastern Cape
	Telephone	+27 41 392 9800
	Fax	+27 41 392 9880
	Email	peter@carifro.com
11.2	The <i>works</i> are	UPGRADING AND MODIFICATION OF HVAC SYSTEMS AT EAST LONDON AIRPORT
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> • Availability of As Built information • Access to Site • Site Constraints and Constructability • Availability of equipment and components
11.2	The <i>Works Information</i> is in	Part C3 'Scope of Works' section of this contract
11.2	The <i>Site Information</i> is in	Part C3 'Scope of Works' section of this contract
11.2	The <i>boundary of the site</i> is	East London Airport precinct
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period of reply</i> is	Seven (7) days
3	Time	
31.2	The <i>starting date</i> is	upon signature of the contract by ACSA
11.2	The <i>completion date</i> is	6 months after the <i>starting date</i>
30.1	The <i>access date</i> is	To be advised
31.1	The <i>Contractor</i> submits a first (preliminary) programme with the tender by the tender closing date	Tender Closing Date
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than :	Two (2) weeks



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SOUTH AFRICA

35.1	The <i>Employer</i> is not willing to take over the works before the <i>completion date</i>	The <i>Employer</i> and Others will have access to the <i>works</i> during construction or prior to completion. Such access by the <i>Employer</i> and Others shall not relieve the <i>Contractor</i> from liability for the completion of the <i>works</i> in accordance with the Works Information and in terms of this contract.																												
4 Testing and Defects																														
42.2	The <i>defects date</i> is	Twelve (12) months after Completion of the whole of the <i>works</i>																												
43.2	The <i>defects correction period</i> is	Two (2) weeks																												
5 Payment																														
50.1	The <i>assessment interval</i> is :	four (4) weeks																												
50.1	The <i>currency of this contract</i> is the :	South African Rand																												
51.2	The period within which payment is made is :	Four (4) weeks																												
51.4	The <i>interest rate</i> is :	The prime lending rate of the Nedbank Bank, as determined from time to time																												
6 Compensation events																														
60.1	The <i>weather measurements</i> to be recorded for each calendar month are:	<ul style="list-style-type: none"> ▪ the cumulative rainfall (mm) ▪ the number of days with rainfall more than 10 mm ▪ the number of days with minimum air temperature less than 0 degrees Celsius 																												
60.1	The place where weather is to be recorded (on the Site) is	At the Construction Site Office and the records to be kept on site in a file clearly marked for this purpose																												
60.1	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Month</th> <th>Days</th> <th>Month</th> <th>Days</th> </tr> </thead> <tbody> <tr> <td>January</td> <td>1</td> <td>July</td> <td>4</td> </tr> <tr> <td>February</td> <td>1</td> <td>August</td> <td>3</td> </tr> <tr> <td>March</td> <td>2</td> <td>September</td> <td>2</td> </tr> <tr> <td>April</td> <td>2</td> <td>October</td> <td>2</td> </tr> <tr> <td>May</td> <td>3</td> <td>November</td> <td>2</td> </tr> <tr> <td>June</td> <td>3</td> <td>December</td> <td>1</td> </tr> </tbody> </table>	Month	Days	Month	Days	January	1	July	4	February	1	August	3	March	2	September	2	April	2	October	2	May	3	November	2	June	3	December	1
Month	Days	Month	Days																											
January	1	July	4																											
February	1	August	3																											
March	2	September	2																											
April	2	October	2																											
May	3	November	2																											
June	3	December	1																											
7	Title	No data required for this section of the <i>conditions of contract</i>																												



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8	Risks and Insurance	
84.1	The <i>Employer</i> provides these insurances	Refer to the Insurance Clauses which are attached at the end of the Contract Data
84.2	The <i>Contractor</i> provides the insurance stated in	The Insurance Clauses which are attached at the end of the Contract Data. The insurances are in the joint names of the Parties and provide cover for events which are at the Contractor's risk from the starting date until the Defects Certificate or a termination certificate has been issued.
	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract for any one event is:	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993
9	Termination	No data required for this section of the <i>conditions of contract</i>
10	Data for Main Options	
B	Priced contract with Bill of Quantities	Summary page to be included with tender offer. Complete priced Bill of Quantities to be priced within 5 (five) working days of request from Project Manager and/or Supervisor
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	The person appointed jointly by the parties from the list of adjudicators contained below
W1.2	The <i>Adjudicator nominating body</i> is	The current Chairman of Johannesburg Advocate's Bar Council
W1.4	The <i>tribunal</i> is	Arbitration
W1.4	If the <i>tribunal</i> is arbitration, the arbitration procedure is	The <i>arbitration procedure</i> is set out in The Rules for the Conduct of Arbitrations 2013 Edition, 7th Edition, published by The Association of Arbitrators, (Southern Africa)
W1.4	The place where arbitration is to be held is	Johannesburg, South Africa.
W1.4	The person or organisation who will choose an arbitrator	The <i>Arbitrator</i> is the person selected by the Parties as and when a dispute arises in terms of the relevant Z Clause, from the Panel of Arbitrators provided under the relevant Z clause if the arbitration procedure does not state who selects an arbitrator. The Arbitrator nominating body is the Chairman of the Johannesburg Advocates Bar Council.
12	Data for Secondary Option Clauses	



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SOUTH AFRICA

X7	Delay Damages	
	Delay damages of the <i>works</i> are	Amount per day is 0.05%, to the maximum of 10% of the Contract value
X13	Performance bond	
X13.1	The amount of the performance bond is	10% of the contract value. Pro-forma draft of a performance bond to be used is attached to this contract.
X16	Retention	
X16.1	The <i>retention percentage</i> is	5% of the Contract value.
X18	Limitation of Liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	The total costs incurred and/or damages suffered to the Employer's Property
X18.3	The <i>Contractor's</i> total liability to the Employer for defects due to his design which are not listed on the Defects Certificate is limited to	The total costs incurred and/or damages suffered to the Employer's Property
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to	<p>The Contractor's total direct liability to the Employer for all matters arising under or in connection with this contract, other than the excluded matters, is limited to The total costs incurred and/or damages suffered to the Employer's Property and applies in contract, tort or delict and otherwise to the extent allowed under the law of the contract.</p> <p>The excluded matters are amounts payable by the Contractor as stated in this contract for</p> <ul style="list-style-type: none"> - Loss of or damage to the Employer's property, - Delay damages, - Defects liability, - Insurance liability to the extent of the Contractor's risks - loss of or damage to property (other than the <i>works</i>, Plant and Materials), - death of or injury to a person; - damage to third party property; and - infringement of an intellectual property right



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SOUTH AFRICA

Z	The <i>Additional conditions of contract</i> are	Z1 – Z20
Amendments to the Core Clauses		
Z1	Interpretation of the law	
Z1.1	Add to core clause 12.3: Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the <i>Project Manager</i> , the <i>Supervisor</i> , or the <i>Adjudicator</i> does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.	
Z2	Providing the Works:	
Z2.1	Delete core clause 20.1 and replace with the following: The <i>Contractor</i> provides the works in accordance with the Works Information and warrants that the results of the Works, when complete, shall be fit for their intended purpose	
Z3	Other responsibilities:	
Z3.1	Add the following at the end of core clause 27: The <i>Contractor</i> shall have satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information and drawings provided to him as at the Contract Date	
Z3.2	The <i>Contractor</i> shall be responsible for the correct setting out of the <i>Works</i> in accordance with the original points, lines and levels stated in the <i>Works</i> Information or notified by the <i>Project Manager</i> , <i>Supervisor</i> or the <i>Employer</i> . Any errors in the positioning of the <i>Works</i> shall be rectified by the <i>Contractor</i> at the <i>Contractor's</i> own costs.	
Z4	Extending the defects date:	
Z4.1	Add the following as a new core clause 46: If the <i>Employer</i> cannot use the <i>works</i> due to a Defect, which arises after Completion and before the <i>defects date</i> , the <i>defects date</i> is delayed by a period equal to that during which the <i>Employer</i> , due to a Defect, is unable to use the <i>works</i>	
Z4.2	If part of the <i>works</i> is replaced due to a Defect arising after Completion and before the <i>defects date</i> , the <i>defects date</i> for the part of the <i>works</i> which is replaced is delayed by a period equal to that between Completion and the date by when the part has been replaced	
Z4.3	The <i>Project Manager</i> notifies the <i>Contractor</i> of the change to a <i>defect date</i> when the delay occurs. The period between Completion and an extended <i>defects date</i> does not exceed twice the period between Completion and the <i>defects date</i> stated in the Contract Data	
Z5	Termination	
Z5.1	Add the following to core clause 91.1, at the second main bullet, fifth sub-bullet point, after the words “assets or”: “business rescue proceedings are initiated or steps are taken to initiate business rescue proceedings”.	
Amendment to the Secondary Option Clauses		
Z6	Performance Bond	
Z6.1	Amend the first sentence of clause X13.1 to read as follows: The <i>Contractor</i> gives the <i>Employer</i> an unconditional, on-demand performance bond, provided by a bank which the <i>Project Manager</i> and the <i>Employer</i> have accepted, for the amount stated in the Contract Data and in the form set out in Annexure C.ii of this Contract Data.	



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SOUTH AFRICA

Z6.2 Add the following new clause as Option X13.2:

The *Contractor ensures* that the performance bond is valid and enforceable until the end of the *contract period*. If the terms of the performance bond specifies its expiry date, and the end of the *contract period* does not coincide with such expiry date, four weeks prior to the said expiry date, the *Contractor* extends the validity of the performance bond until the end of the *contract period*. If the *Contractor* fails to so extend the validity of the performance bond, the *Employer* may claim the full amount of the performance bond and retain the proceeds as cash security

Z7 Limitation of liability:

Insert the following new clause as Option X18.6:

Z7.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00

Z7.2 Notwithstanding any other clause in this contract, any proceeds received from any insurances or any proceeds which would have been received from any insurances but for the conduct of the *Contractor* shall be excluded from the calculation of the limitations of liability listed in the contract

Additional Z Clauses

Z8 Cession, delegation and assignment

Z8.1 The *Contractor* shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*, which consent shall not be unreasonably withheld. This clause shall be binding on the liquidator/business rescue practitioner /trustee (whether provisional or not) of the *Contractor*

Z8.2 The *Employer* may cede and delegate its rights and obligations under this contract to any person or entity

Z9 Joint and several liability

Z9.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons, these persons are deemed to be jointly and severally liable to the *Employer* for the performance of the Contract.

Z9.2 The *Contractor* shall, within 1 week of the Contract Date, notify the *Project Manager* and the *Employer* of the key person who has the authority to bind the *Contractor* on their behalf.

Z9.3 The *Contractor* does not materially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without prior written consent of the *Employer*.

Z10 Ethics

Z10.1 The *Contractor* undertakes:

Z10.1.1 not to give any offer, payment, consideration, or benefit of any kind, which constitutes or could be construed as an illegal or corrupt practice, either directly or indirectly, as an inducement or reward for the award or in execution of this contract;

Z10.1.2 to comply with all laws, regulations or policies relating to the prevention and combating of bribery, corruption and money laundering to which it or the *Employer* is subject, including but not limited to the Prevention and Combating of Corrupt Activities Act, 12 of 2004.

Z10.2 The *Contractor's* breach of this clause constitutes grounds for terminating the *Contractor's* obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.



AIRPORTS COMPANY
SOUTH AFRICA

- Z10.3** If the *Contractor* is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices, including but not limited to the making of offers (directly or indirectly), payments, gifts, gratuity, commission or benefits of any kind, which are in any way whatsoever in connection with the contract with the *Employer*, the *Employer* shall be entitled to terminate the contract in accordance with the procedures stated in core clause 92.2. the amount due on termination is A1.

Z11 Confidentiality

- Z11.1** All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the *Contractor* and shall not be used or divulged or published to any person not being a party to this contract, without the prior written consent of the *Project Manager* or the *Employer*, which consent shall not be unreasonably withheld.
- Z11.2** If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the *Project Manager*.
- Z11.3** This undertaking shall not apply to –
- Z11.3.1** Information disclosed to the employees of the *Contractor* for the purposes of the implementation of this agreement. The *Contractor* undertakes to procure that its employees are aware of the confidential nature of the information so disclosed and that they comply with the provisions of this clause;
- Z11.3.2** Information which the *Contractor* is required by law to disclose, provided that the *Contractor* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Contractor* may disclose such information only to the extent required by law and shall use reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed;
- Z11.3.3** Information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time);
- Z11.4** The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*
- Z11.5** The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

Z12 Employer's Step-in rights

- Z12.1** If the *Contractor* defaults by failing to comply with his obligations and fails to remedy such default within 2 weeks of the notification of the default by the *Project Manager*, the *Employer*, without prejudice to his other rights, powers and remedies under the contract, may remedy the default either himself or procure a third party (including any subcontractor or supplier of the *Contractor*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Contractor*
- Z12.2** The *Contractor* co-operates with the *Employer* and facilitates and permits the use of all required information, materials and other matter (including but not limited to documents and all other drawings, CAD materials, data, software, models, plans, designs, programs, diagrams, evaluations, materials, specifications, schedules, reports, calculations, manuals or other documents or recorded information (electronic or otherwise) which have been or are at any time prepared by or on behalf of the *Contractor* under the contract or otherwise for and/or in connection with the *works*) and generally does all things required by the *Project Manager* to achieve this end.
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Z13	Liens and Encumbrances
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Z13.1	The <i>Contractor</i> keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The <i>Contractor</i> , vis-a-vis the <i>Employer</i> , waives all and any liens which he may from time to time have, or become entitled to over such Equipment and any part thereof and procures that his Subcontractors similarly, vis-a-vis the <i>Employer</i> , waive all liens they may have or become entitled to over such Equipment from time to time
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Z14	Intellectual Property
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Z14.1	Intellectual Property (“IP”) rights means all rights in and to any patent, design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works.
Z14.2	IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the <i>works</i> .
Z14.3	The <i>Contractor</i> gives the <i>Employer</i> an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the <i>works</i> for the purposes of constructing, repairing, demolishing, operating and maintaining the works
Z14.4	The written approval of the <i>Contractor</i> is to be obtained before the <i>Contractor’s</i> IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any <i>Contractor’s</i> IP available to any third party the <i>Employer</i> shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the <i>Employer</i> would use to protect its IP
Z14.5	The <i>Contractor</i> shall indemnify and hold the <i>Employer</i> harmless against and from any claim alleging an infringement of IP rights (“ the claim ”), which arises out of or in relation to:
Z14.5.1	the <i>Contractor’s</i> design, manufacture, construction or execution of the Works
Z14.5.2	the use of the <i>Contractor’s</i> Equipment, or
Z14.5.3	the proper use of the Works.
Z14.6	The <i>Employer</i> shall, at the request and cost of the <i>Contractor</i> , assist in contesting the claim and the <i>Contractor</i> may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.



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SOUTH AFRICA

Z16 Dispute resolution:

Z16.1 Appointment of the Adjudicator

An *Adjudicator* is appointed when a dispute arises, from the Panel of Adjudicators below. The referring party nominates an Adjudicator, which nomination is either accepted or rejected by the other party. In the instance of a rejection of the nominated *Adjudicator*, the referring Party refers the appointment deadlock to the Chairman of the Johannesburg Bar Council, who appoints an *Adjudicator* listed in the Panel of Adjudicators below

The Parties appoint the *Adjudicator* under the NEC3 Adjudicator's Contract, April 2013

Panel of Adjudicators

Name	Location	Contact details (phone & e mail)
Adv. Ghandi Badela	Gauteng	+27 11 282 3700 ghandi@badela.co.za
Mr. Errol Tate Pr. Eng.	Durban	+27 11 262 4001 Errol.tate@mweb.co.za
Adv. Saleem Ebrahim	Gauteng	+27 11 535-1800 salimebrahim@mweb.co.za
Mr. Sebe Msutwana Pr. Eng.	Gauteng	+27 11 442 8555 sebe@civilprojects.co.za
Mr. Sam Amod	Gauteng	sam@samamod.com
Adv. Sias Ryneke SC	Gauteng	083 653 2281 ryneke@duma.nokwe.co.za
Mr. Emeka Ogbugo (Quantity Surveyor)	Pretoria	+27 12 349 2027 emeka@gosiame.co.za

Z16.2 Appointment of the Arbitrator

An *Arbitrator* is appointed when a dispute arises from the Panel of Arbitrators below. The referring party nominates an Arbitrator, which nomination is either accepted or rejected by the other party. In the instance of a rejection of the nominated *Arbitrator*, the referring Party refers the appointment deadlock to the Chairman of the Johannesburg Bar Council, who appoints an *Arbitrator* listed in the Panel of Arbitrators below

Panel of Arbitrators

Name	Location	Contact details (phone & e mail)
Adv. Ghandi Badela	Gauteng	+27 11 282 3700 ghandi@badela.co.za
Mr. Errol Tate Pr. Eng.	Durban	+27 11 262 4001 Errol.tate@mweb.co.za
Adv. Saleem Ebrahim	Gauteng	+27 11 535-1800 salimebrahim@mweb.co.za
Mr. Sebe Msutwana Pr. Eng.	Gauteng	+27 11 442 8555 sebe@civilprojects.co.za
Mr. Sam Amod	Gauteng	sam@samamod.com
Adv. Sias Ryneke SC	Gauteng	083 653 2281 ryneke@duma.nokwe.co.za
Mr. Emeka Ogbugo (Quantity Surveyor)	Pretoria	+27 12 349 2027 emeka@gosiame.co.za

Z17 Notification of a compensation event

Z17.1 Delete "eight weeks" in clause 61.3 and replace with "four weeks". Delete the words "unless the event arises from the Project Manager or the Supervisor giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption."



AIRPORTS COMPANY
SOUTH AFRICA

Z18	BBBEE Certificate
Z18.1	The <i>Contractor</i> shall be expected to annually present a compliant BEE Certificate. Failure to do adhere to these requirements shall be considered a material breach of the conditions of this Contract, the sanction for which may be a cancellation of this Contract.
Z19	Communication
Z19.1	Add a new Core Clause 14.5 and 14.6 to read as follows: The <i>Project Manager</i> requires the written consent of the Employer if an action will result in a change to the design, scope, and Works information that is 5% or more
Z19.2	The <i>Project Manager</i> requires the written consent of the Employer if an action will result in the Completion Date being extended by more than 30 days.
Z20	Delegation
	As stipulated by Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993 as amended the <i>Contractor</i> agrees to the following:
Z20.1	As part of this contract the <i>Contractor</i> acknowledge that it (mandatory) is an employer in its own right with duties as prescribed in the Occupational Health and Safety Act No 85 of 1993 as amended and agree to ensure that all work being performed, or Equipment, Plant and Materials being used, are in accordance with the provisions of the said Act, and in particular with regard to the Construction Regulations



PART C1.2b CONTRACT DATA

PART TWO – DATA PROVIDED BY THE CONTRACTOR

Clause	Statement	Data
10.1	The Contractor is (Name): Address: Telephone No. Fax No.	
11.2	The <i>working areas</i> are	Only the Site Area. See C4 'Site Information'
24.1	The <i>Contractor's Key people</i> are:	CV's to be appended to Tender Schedule
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	



AIRPORTS COMPANY
SOUTH AFRICA

Name:

Job:

Responsibility:

Qualifications:

Experience:

11.2	The <i>completion date</i> is	6 months after the <i>starting date</i>
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> • Existing Services • Access to Site • Delay in supply of material and/or equipment • Progress of the works against the program • Travelling public and ACSA stakeholders
11.2	The <i>Works Information</i> is in	Part C3 'Scope of Works' section of this contract
31.1	The programme identified in the	To be submitted with the tender document



AIRPORTS COMPANY
SOUTH AFRICA

PART C1: AGREEMENTS AND CONTRACT DATA

C1.3: Form of Guarantee

PRO FORMA FOR PERFORMANCE BOND

PERFORMANCE BOND

Brief description of contract **UPGRADING AND MODIFICATION OF HVAC SYSTEMS AT EAST LONDON AIRPORT**

Name and address of Beneficiary.....
..... (whom the contract defines as the Contractor).

We, the undersigned and..... in our capacities as Guarantor's..... of (**Registration Number:**) (hereinafter called "the Bank") have been informed that hereinafter called the 'Principal') is your Contractor under such contract, which requires him to obtain an irrevocable, unconditional performance security.

At the request of the Principal, we(name of bank) hereby irrevocably undertake to pay you, the Employer, any sum or sums not exceeding in total the amount of(the "Guaranteed Amount") upon receipt by us of your first written demand stating that such an amount (or lesser amount) as may be claimed is due and payable to the Employer.

This guarantee constitute an irrevocable, unconditional, non-negotiable and non-transferable undertaking to pay in accordance with the above, subject to the proviso that this Letter will not be interpreted as extending the Bank's liability to anything more than the Guaranteed Amount.

Notwithstanding anything to the contrary herein contained, the Bank's obligation shall be construed as principal and not as accessory to the contract and shall not be delayed or discharged by the fact that a dispute exists between the Employer and the Contractor.

We undertake to pay you such Guaranteed Amount upon receipt by us, within such period of 14 days, of your first written demand stating that such an amount (or lesser amount) as may be claimed is due and payable to the Employer.

The guarantee shall be governed by and construed in accordance with the laws of the Republic of South Africa

Signed at _____ on _____ 20....

For:

Registration Number:

Name & Position

As witnesses:

- 1. _____
- 2. _____



AIRPORTS COMPANY
SOUTH AFRICA

PART C1: AGREEMENTS AND CONTRACT DATA

C1.4: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 OF 1993) & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist Airport Company South Africa (ACSA) in order to comply with the requirements of:

1. The Occupational Health & Safety (Act 85 of 1993) and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organisation: AIRPORTS COMPANY SOUTH AFRICA EAST LONDON AIRPORT
Physical Address: Airport Company South Africa East London Airport 66 Settlers Way, East London, Eastern Cape, 5201

Hereinafter referred to as "Client"

Name of organisation:
Physical Address:

Hereinafter referred to as "the Mandatary/ Principal Contractor"



AIRPORTS COMPANY
SOUTH AFRICA

MANDATORY'S MAIN SCOPE OF WORK

GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

1. The Occupational Health & Safety Act comprises of SECTION 1-50 and all unrepealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.
2. "Mandatory" is defined as including as agent, a principal contractor or a contractor for work, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant
3. Section 37 of the Occupational Health & Safety Act potentially punishes Employers (PRINCIPAL CONTRACTOR) for unlawful acts or omissions of Mandataries (CONTRACTORS) save where a Written Agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATARY.
4. All documents attached or refer to in the above Agreement form an integral part of the Agreement.
5. To perform in terms of this agreement Mandataries must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.
6. Mandataries who utilise the services of their own Mandataries (contractors) must conclude a similar Written Agreement with them.
7. Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.
8. This Agreement shall be binding for all work the Mandatory undertakes for the client.
9. All documentation according to the Safety checklist including a copy of the written Construction Manager appointment in terms of construction regulation 8, must be submitted 7 days before work commences.

THE UNDERTAKING

The Mandatory undertakes to comply with:

INSURANCE

1. The Mandatory warrants that all their employees and/or their contractor's employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client's premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor is in good standing with the Compensation Fund or Licensed Insurer.
2. The Mandatory warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client's premises, or which shall remain in force for that duration of their contractual relationship with the Client, whichever period is the longest.
 - a. Public Liability Insurance Cover as required by the Subcontract Agreement.
 - b. Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

The Mandatory undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will at all times comply with the following conditions:

1. All work performed by the Mandatory on the Client's premises must be performed under the close supervision of the Mandatory's employees who are to be trained to understand the hazards associated with any work that the Mandatory performs on the Client's premises.
2. The Mandatory shall be assigned the responsibility in terms of Section 16(1) of the OHS Act 85 of 1993, if the Mandatory assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatory shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatory shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
5. The Mandatory shall appoint competent persons who shall be trained on any Occupational Health & Safety



AIRPORTS COMPANY
SOUTH AFRICA

- aspect pertaining to them or to the work that is to be performed.
- 6. The Mandatary shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
- 7. Any personal protective equipment required shall be issued by the Mandatary to his/her employees and shall be worn at all times.
- 8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
- 9. No unsafe equipment/machinery and/or articles shall be used by the Mandatary or contractor on the Client's premises.
- 10. All incidents/accidents referred to in OHS Act shall be reported by the Mandatary to the Provincial Director: Department of Labour as well as to the Client.
- 11. No user shall be made by the Mandatary and/or their employees and or their subcontractors of any of the Client's machinery/article/substance/plant/personal protective equipment without prior written approval.
- 12. The Mandatary shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duty completed approved permit.
- 13. The Mandatary shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client's premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
- 14. Full participation by the Mandatary shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.

FURTHER UNDERTAKING

- 1. Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatary. The signing power of this representative must be designated in writing by the Chief Executive Officer of the Mandatary. A copy of this letter must be made available to the Client.
- 2. The Mandatary confirms that he has been informed that he must report to the Client's management, in writing anything he/she deems to be unhealthy and /or unsafe. He has versed his employees in this regard.
- 3. The Mandatary warrants that he/she shall not endanger the health & safety of the Client's employees and other persons in any way whilst performing work on the Client's premises.
- 4. The Mandatary understands that no work may commence on the Client's premises until this procedure is duly completed, signed and received by the Client.
- 5. Non-compliance with any of the above clauses may lead to an immediate cancellation of the contract.

ACCEPTANCE BY MANDATARY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

Ia duly authorised 16.2 Appointee acting for and on behalf of(company name) undertake to ensure that the requirements and the provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatary – WCA/ Federated Employers Mutual N^o: Expiry date

.....
SIGNATURE ON BEHALF OF MANDATARY
(Warrant his authority to sign)

.....
DATE

.....
SIGNATURE ON BEHALF OF THE CLIENT
AIRPORT COMPANY SOUTH AFRICA

.....
DATE



PART C1: AGREEMENTS AND CONTRACT DATA

C1.5: ACSA INSURANCE CLAUSES

INSURANCE CLAUSES FOR CAPEX PROJECTS

SECTION A: DEFINITIONS

**ACSA Maintenance Contracts Insurance Clause.
Insurance Affected by the Employer.**

For OPEX projects and non-construction CAPEX projects on the **landside (including inside the terminal building)**:

The successful bidder must source the following insurance cover, which is the deductible in the ACSA insurance cover:

- Aviation liability insurance cover for an indemnity limit not less than R100 000 (one hundred thousand rands).
- Submit proof of insurance to ACSA before the work starts, and annually for the duration of the project.

For OPEX projects and non-construction CAPEX projects on the **airside (aprons, runways, taxiways)**:

The successful bidder must source the following insurance cover, which is the deductible in the ACSA insurance cover:

- Aviation liability insurance cover for an indemnity limit not less than R300 000 (three hundred thousand rands).
- Submit proof of insurance to ACSA before the work starts, and annually for the duration of the project.

PART C2: PRICING DATA

Document reference	Title	No of pages
	This cover page	1
C2.1	Pricing Assumptions: Option B	3
C2.2	Bill of Quantities Summary Page	1
C2.3	Bill of Quantities	72
	Total number of pages	6



AIRPORTS COMPANY
SOUTH AFRICA



C2.1. Pricing Assumptions: Option B

Clause 11 in NEC3 Engineering and Construction Contract, April 2013 of Option B states:

- Identified and defined terms** 11
- 11.2 (21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.
- (28) The Price for Work Done to Date is the total of
- the quantity of the work which the Contractor has completed for each item in the Bill of Quantities multiplied by the rate and
 - a proportion of each lump sum which is the proportion of the work covered by the item which the Contractor has completed.
- Completed work is work without Defects which would either delay or be covered by immediately following work.
- (31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

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

Function of the Bill of Quantities

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

Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract (April 2013) Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

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

The P & G section of the bill is not used for the assessment of compensation events.



AIRPORTS COMPANY SOUTH AFRICA

Measurement and payment

Symbols

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

Abbreviation	Unit
%	Percent
hr	Hour
kg	Kilogram
kPa	Kilopascal
kW	Kilowatt
l	Litre
l/s	Litres per seconds
m/s	Metres per second
m	Metre
mm	Millimetre
m ²	square metre
m ³	cubic metre
m ³ /s	Metres per second
MN	Meganewton
No.	Number
Prov sum ¹	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

General assumptions

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.

The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.

An item against which no Price is entered is treated as covered by other Prices or rates in the *bill of quantities*.

The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.

The short descriptions of the items of payment given in the *Bills of Quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

Amplification of or assumptions about measurement items

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

DISBURSMENT SCHEDULE

- (a) Only project related costs listed below and presented to ACSA are compensated by ACSA.



AIRPORTS COMPANY
SOUTH AFRICA

- (b) Any disbursement costs related to travelling to and from the airport or accommodation for the purpose of the project(s) is deemed to be inclusive in the agreed fee structure, unless otherwise agreed in writing by both parties. Disbursement costs not mentioned below (including under note (e)) may be brought to the attention of the ACSA project representative for approval and agreement on the recoverable amount, prior to incurring such cost.
- (c) All rates are exclusive of VAT
- (d) Health and Safety Agent cost is included in the Bill of Quantities
- (e) No mark-up on any disbursement cost is paid.
- (f) No payment for disbursement is made for the following:
 - Travelling and accommodation
 - Typing of correspondence, payment certificates, variation orders, progress reports or financial reports
 - Telephone calls
 - Cellular calls
 - Computer costs
 - Telefaxes (outgoing or incoming)
 - Email (sent or received)



AIRPORTS COMPANY
SOUTH AFRICA

C2.2. Bill of Quantities Summary

*This amount shall be carried to Form of Offer and Acceptance C1.1

Bill No.	Description	Total
Bill 1.1	TERMINAL BUILDING - PRELIMINARY & GENERAL	
Bill 1.2	TERMINAL BUILDING - AIR CONDITIONING	
Bill 1.3	TERMINAL BUILDING - EXTRACTION SYSTEMS	
Bill 1.4	TERMINAL BUILDING - VENTILATION SYSTEMS	
Bill 1.5	TERMINAL BUILDING - BUILDERS WORKS	
Bill 2.1	FIRE STATION - PRELIMINARY & GENERAL	
Bill 2.2	FIRE STATION - AIR CONDITIONING	
Bill 2.3	FIRE STATION - EXTRACTION SYSTEMS	
Bill 2.4	FIRE STATION - BUILDERS WORKS	
Bill 3.1	CONTROL CENTRE - PRELIMINARY & GENERAL	
Bill 3.2	CONTROL CENTRE - AIR CONDITIONING	
Bill 3.3	CONTROL CENTRE - BUILDERS WORKS	
Bill 4.1	CAR RENTAL - PRELIMINARY & GENERAL	
Bill 4.2	CAR RENTAL - AIR CONDITIONING	
Bill 4.3	CAR RENTAL - EXTRACTION SYSTEMS	
Bill 4.4	CAR RENTAL - VENTILATION SYSTEMS	
Bill 4.5	CAR RENTAL - BUILDERS WORKS	
Bill 5.1	RAMP HANDLERS - PRELIMINARY & GENERAL	
Bill 5.2	RAMP HANDLERS - AIR CONDITIONING	
Bill 5.3	RAMP HANDLERS - EXTRACTION SYSTEMS	
Bill 5.4	RAMP HANDLERS - VENTILATION SYSTEMS	



AIRPORTS COMPANY
SOUTH AFRICA

Bill 5.5	RAMP HANDLERS - BUILDERS WORKS	
Bill 6,1	HVAC ESSENTIAL SUPPLY CONNECTIONS	
		SUB TOTAL
		Contingency 0%
	12 Month Warranty Maintenance (Guarantee included in costings)	
		Preliminaries and General 0%
		TOTAL TENDER VALUE (EXCL VAT)
		Add VAT 15%
TOTAL TENDER VALUE (INCL VAT)		



AIRPORTS COMPANY
SOUTH AFRICA

C2.3. Bill of Quantities

Bill 1	Terminal Building					
No.	Description	Unit	Qty	Rate	Install	Total
1.1	PRELIMINARY & GENERAL					
	Note: All items shall be priced for whatever cost may be considered necessary for Preliminary and General to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited, to the following:					
1.1.1	Allow for all contractual requirements including provision of all contractors all risk insurances, 10% Performance Guarantee, etc.	Item	1			
1.1.2	Site Establishment - on the Land Side for the contractors camp. Establishment of workshops, sheds, offices, toilets etc. required by Contractor for the execution of the works.	Item	1			
1.1.3	Equipment and Systems operation instruction and training for Employer's staff prior to handover to the Client	Item	1			
1.1.4	Three (3) copies of O&M Manuals (Hard and Electronic copies)	Item	1			
1.1.5	"As Built" drawings (3 copies)	Item	1			
1.1.6	Provision of full Maintenance and Warranty for all installations and equipment for 12 (Twelve) months from the date of Practical Completion. Service records to be compiled and submitted for each service carried out. Refer to Tender Specification.	Item	1			
1.1.7	Allowance for Electrical Connections and CoCs	Item	1	R 120 000,00		R120 000,00
1.1.8	Scaffolding	Item	1			
1.1.9	Cranage - 30m boom	Item	1			
1.1.10	Removal of existing and redundant Air Handling Units [x 4] and Chillers [x 2]	Item	1			
1.1.11	Contingencies	PC Sum	1			
Carried Forward to Bill 1.1 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 1	Terminal Building					
No.	Description	Unit	Qty	Rate	Install	Total
1.1	AIR CONDITIONING SYSTEMS					
	Supply, Delivery and Installation of Split units Air Conditioning systems complete with indoor and outdoor units. Including trunking, piping between outdoor and indoor portions of unit, mounting brackets, condensate drain pumps and all necessary accessories.					
	Manufacturers - Daikin, LG, Midea, Mitsubishi, Samsung or similar approved.					
	Lost Baggage 01					
1B.001	2.9kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	2			
1B.002	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	26			
1B.003	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	2			
	Lost Baggage 02					
1B.004	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.005	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	13			
1B.006	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Vodacom					
1B.007	5.35kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.008	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15			
1B.009	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	MTN					
1B.010	3.6kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.011	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	12			
1B.012	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	IMALI					
1B.013	3.6kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.014	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	7			
1B.015	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	UPS Room					
1B.016	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.017	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.018	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Workshop					
1B.013	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	2			
1B.014	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	32			
1B.015	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	2			
						Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
1B.027	0.4mm Low Pressure, Spiral Galvanised Steel Ducting - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	12	
1B.028	200mm - 300mm wire reinforced aluminium flexible ducting - ^{C/W} clamps, duct sealant and fixings - 1500mm long	No	5	
1B.029	200mm - 300mm diameter balancing damper	No	1	
Staff Security				
1B.030	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.031	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15	
1B.032	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Fire Arm				
1B.033	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.034	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5	
1B.035	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Coupon Office				
1B.036	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.037	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10	
1B.038	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
	SAA Ticket Sales			
1B.039	2.9kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	2	
1B.040	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	30	
1B.041	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	2	
	IT Room			
1B.030	7.1kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.031	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	6	
1B.032	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	Additional Retail			
1B.033	7.1kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.034	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	6	
1B.035	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
	IT Room 02			
1B.039	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.040	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	6	
1B.041	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	Additional Retail 02			
1B.042	7.1kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.043	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8	
1B.044	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	ATM Office			
1B.045	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.046	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8	
1B.047	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
	Internet Café			
1B.048	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.049	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	9	
1B.050	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	VIP Lounge			
1B.051	14.1kW Inverter type Concealed Hideaway air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.052	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15	
1B.053	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
1B.054	Supply Air Diffuser - 600 x 600/250 ϕ Spigot	No	6	
1B.055	Return Air Grille - 1200 x 600/350 ϕ Spigot	No	1	
1B.056	0.6mm Low Pressure, Rectangular Galvanised Steel Ducting - including all transformation pieces, brackets & supports - as per SANS 1238			
	0.4mm Low Pressure, Spiral Galvanised Steel Ducting - including all transformation pieces, brackets & supports - as per SANS 1238			
	950x350	m	6	
	700x450	m	2	
	300x350	m	11	
	180x350	m	3	
	ϕ 250	m	3	
1B.058	200mm - 300mm wire reinforced aluminium flexible ducting - ^{C/W} clamps, duct sealant and fixings - 1500mm long	No	6	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	Coffee Shop						
1B.060	10.6kW Inverter type Concealed Hideaway air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1				
1B.061	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15				
1B.062	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
1B.063	Supply Air Diffuser - 600 x 600/200 ϕ Spigot	No	4				
1B.064	Return Air Grille - 1200 x 600/350 ϕ Spigot	No	1				
1B.065	0.6mm Low Pressure, Rectangular Galvanised Steel Ducting - including all transformation pieces, brackets & supports - as per SANS 1238						
	0.4mm Low Pressure, Spiral Galvanised Steel Ducting - including all transformation pieces, brackets & supports - as per SANS 1238						
	650x300	m	1				
	300x250	m	1				
	180x250	m	3				
	ϕ 200	m	1				
	ϕ 300	m	1				
1B.067	200mm - 300mm wire reinforced aluminium flexible ducting - C/W clamps, duct sealant and fixings - 1500mm long	Each	3				
	1 Time Ticket Sales						
1B.069	2.9kW Inverter type Mid-Wall Split Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1				
1B.070	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15				
1B.071	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
						Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	Office					
1B.072	2.9kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.073	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	13			
1B.074	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Search Room					
1B.075	2.9kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.076	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15			
1B.077	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Security Office					
1B.078	2.9kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.079	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	13			
1B.080	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Medical Room					
1B.081	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.082	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	13			
1B.083	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
						Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
Premier Lounge				
1B.084	10.5kW Inverter type Cassette Air conditioning unit ^C / _W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	3	
1B.085	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	36	
1B.086	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	3	
Business Class Lounge				
1B.087	10.5kW Inverter type Cassette Air conditioning unit ^C / _W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	3	
1B.088	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	36	
1B.089	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	3	
FIRST FLOOR				
Weather Office				
1B.087	10.5kW Inverter type Cassette Air conditioning unit ^C / _W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	2	
1B.088	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	12	
1B.089	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	2	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:	
	E.W.O.S.					
1B.090	4.8kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.091	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.092	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
1B.093	4.8kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.094	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.095	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Electronic Workshop					
1B.096	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.097	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.098	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
					Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	Existing Rest Room						
1B.105	4.8kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1				
1B.106	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5				
1B.107	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
	Office						
1B.108	7.1kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	2				
1B.109	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	12				
1B.110	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	2				
	New Manager's Office						
1B.108	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1				
1B.109	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10				
1B.110	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
						Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	Boardroom					
1B.111	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.112	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10			
1B.113	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Conference Room					
1B.114	10.5kW Inverter type Cassette Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.115	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10			
1B.116	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	IT Office					
1B.117	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.118	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	12			
1B.119	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
						Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	Telkom Office					
1B.120	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.121	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.122	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Office 01					
1B.123	4.8kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.124	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10			
1B.125	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Office 02					
1B.126	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.127	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10			
1B.128	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
						Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
	Office 05			
1B.138	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.139	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5	
1B.140	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	Office 06			
1B.141	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.142	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10	
1B.143	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	Office 07			
1B.144	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.145	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10	
1B.146	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
	SAA Rest Room				
1B.147	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.148	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8		
1B.149	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Border Manager				
1B.150	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.151	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5		
1B.152	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Airways Manager				
1B.150	4.8kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.151	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5		
1B.152	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
	Rest Room 02				
1B.150	6.7kW Inverter type Mid-Wall Split Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.151	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5		
1B.152	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Records Room				
1B.153	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.154	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8		
1B.155	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Finance Admin				
1B.156	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.157	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	10		
1B.158	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:						
	Office 08					
1B.159	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.160	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	5			
1B.161	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Departure Control					
1B.162	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.163	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15			
1B.164	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	East End Boardroom					
1B.165	16.1kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.166	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8			
1B.167	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
	Area Sales Manager			
1B.168	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.169	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	15	
1B.170	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	Sales Support			
1B.171	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.172	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8	
1B.173	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
	SAA Office			
1B.174	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1	
1B.175	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	16	
1B.176	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
	Manager's Suite 01				
1B.177	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.178	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	16		
1B.179	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Manager's Suite 02				
1B.177	6.7kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.178	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	17		
1B.179	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
	Store Room				
1B.177	3.6kW Inverter type Mid-Wall Split Air conditioning unit ^{C/W} Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1		
1B.178	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	8		
1B.179	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:						
	Meeting Room					
1B.189	13.4kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.190	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	16			
1B.191	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
	Human Resources					
1B.189	10.5kW Inverter type Cassette Air conditioning unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries	No	1			
1B.190	Additional refrigeration piping between Indoor and Outdoor units - inclusive of pipe ancillaries, wire mesh trays, pipe supports and installation accessories.	m	16			
1B.191	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	<p>Replace Redundant Chilled Water Air Handling Units (AHU's). Supplied and installed to manufacturer's specification and recommendation. Air Handling Units to be installed complete with hard wired Remote Controller, all necessary supports, anti-vibration isolators, brackets, ancillaries and condensate drains.</p>				
1B.192	AHU 01 - Cooling Capacity 154kW : Airflow 6914l/s	No	1		
1B.193	Supply Air Diffuser - 600 x 600/250 ϕ Spigot	No	8		
1B.194	Return Air Grille - 1200 x 600/350 ϕ Spigot	No	1		
1B.195	Class 4, Low Pressure, Rectangular Galvanised Steel Ducting with 25mm Internal Sonic Liner insulation - including all transformation pieces, slip on flanges, brackets & supports - as per SANS 1238	m ²	20		
1B.196	0.4mm Low Pressure, Spiral Galvanised Steel Ducting with 25mm External FRK insulation - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	20		
1B.197	150mm - 350mm wire reinforced aluminium flexible ducting - C/w clamps, duct sealant and fixings - 1500mm long	No	38		
1B.198	150mm - 350mm diameter balancing damper	No	38		
1B.199	1150 x 1000 Fresh Air Inlet Louvre	No	1		
1B.200	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1		

Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

1B.201	AHU 02 - Cooling Capacity 87kW : Airflow 3340l/s	No	1			
1B.202	Supply Air Diffuser - 600 x 600/250 ϕ Spigot	No	8			
1B.203	Return Air Grille - 500 x 500/350 ϕ Spigot	No	2			
1B.204	Class 4, Low Pressure, Rectangular Galvanised Steel Ducting with 25mm Internal Sonic Liner insulation - including all transformation pieces, slip on flanges, brackets & supports - as per SANS 1238	m ²	20			
1B.205	0.4mm Low Pressure, Spiral Galvanised Steel Ducting with 25mm External FRK insulation - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	20			
1B.206	150mm - 350mm wire reinforced aluminium flexible ducting - ^C / _w clamps, duct sealant and fixings - 1500mm long	No	36			
1B.207	150mm - 350mm diameter balancing damper	No	36			
1B.208	800 x 700 Fresh Air Inlet Louvre	No	1			
1B.209	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1			

Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:				
1B.210	AHU 03 - Cooling Capacity 131kW : Airflow 4477l/s	No	1	
1B.211	Supply Air Diffuser - 600 x 600/250ø Spigot	No	9	
1B.212	Return Air Grille - 500 x 500/350ø Spigot	No	2	
1B.213	Class 4, Low Pressure, Rectangular Galvanised Steel Ducting with 25mm Internal Sonic Liner insulation - including all transformation pieces, slip on flanges, brackets & supports - as per SANS 1238	m ²	20	
1B.214	0.4mm Low Pressure, Spiral Galvanised Steel Ducting with 25mm External FRK insulation - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	20	
1B.215	150mm - 350mm wire reinforced aluminium flexible ducting - ^C / _w clamps, duct sealant and fixings - 1500mm long	No	37	
1B.216	150mm - 350mm diameter balancing damper	No	37	
1B.217	1000 x 900 Fresh Air Inlet Louvre	No	1	
1B.218	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1	
1B.219	AHU 04 - Cooling Capacity 95kW : Airflow 2945l/s	No	1	
1B.220	Supply Air Diffuser - 600 x 600/250ø Spigot	No	5	
1B.221	Return Air Grille - 500 x 500/350ø Spigot	No	1	
1B.222	Class 4, Low Pressure, Rectangular Galvanised Steel Ducting with 25mm Internal Sonic Liner insulation - including all transformation pieces, slip on flanges, brackets & supports - as per SANS 1238	m ²	20	
1B.223	0.4mm Low Pressure, Spiral Galvanised Steel Ducting with 25mm External FRK insulation - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	20	
Carried Forward:				



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:

	AHU 04 - Continued						
1B.224	150mm - 350mm wire reinforced aluminium flexible ducting - ^C / _w clamps, duct sealant and fixings - 1500mm long	No	19				
1B.225	150mm - 350mm diameter balancing damper	No	19				
1B.226	800 x 700 Fresh Air Inlet Louvre	No	1				
1B.227	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
1B.228	AHU 05 - Cooling Capacity 104kW : Airflow 4160l/s	No	1				
1B.229	Supply Air Diffuser - 600 x 600/250 ϕ Spigot	No	6				
1B.230	Return Air Grille - 500 x 500/350 ϕ Spigot	No	2				
1B.231	Class 4, Low Pressure, Rectangular Galvanised Steel Ducting with 25mm Internal Sonic Liner insulation - including all transformation pieces, slip on flanges, brackets & supports - as per SANS 1238	m ²	20				
1B.232	0.4mm Low Pressure, Spiral Galvanised Steel Ducting with 25mm External FRK insulation - including all transformation pieces, brackets & supports - as per SANS 1238	m ²	20				
1B.233	150mm - 350mm wire reinforced aluminium flexible ducting - ^C / _w clamps, duct sealant and fixings - 1500mm long	No	26				
1B.234	150mm - 350mm diameter balancing damper	No	26				
1B.235	800 x 800 Fresh Air Inlet Louvre	No	1				
1B.236	Installation & Commissioning (incl all brackets, supports etc.) for each system	No	1				
	Chilled Water Plant						
1B.237	Supplied and installed to manufacturer's specification and recommendation.						
	AquaSnap Air-Cooled Liquid Chiller 30RBP 270R, 268kW - With Greenspeed Intelligence and R32 Refrigerant or equal and approved	No	2				
1B.238	Chilled water system optimiser - Intelligent controller	No	2				



AIRPORTS COMPANY
SOUTH AFRICA

1B.239	Allowance for Flexible pipe connectors / vibration eliminators, Isolation valves at chiller flow & return – Butterfly or ball valves, Non-return (check) valves, Y-strainers, Automatic air vents (high points near chiller) Drain valves at low points	Item	1	R 200 000,00	R 200 000,00
1B.240	Allowance for Pressure gauges (flow & return), Thermometers / temperature gauges- digital or combined P/T ports, Pressure switches / flow switches	Item	1	R 60 000,00	R 60 000,00
1B.241	Allowance for All pipe insulation disturbed during works; Insulation at chiller nozzles Replace with: Closed-cell insulation/rockwool, UV-protected jacketing for outdoor piping, S cladding. Replace vapour barriers fully (no patching)	Item	1	R 80 000,00	R 80 000,00
1B.242	Allowance for System flushing & chemical cleaning. New water treatment chemicals	Item	1	R 50 000,00	R 50 000,00
1B.243	Allowance for Air Condensor duct cowls over existing ductwork	Item	1	R 50 000,00	R 50 000,00
1B.244	Installation, Testing & Commissioning (incl all brackets, supports etc.) for each chiller system and AHUs	No	7		
Carried Forward to Bill 1.2 Collection:					



AIRPORTS COMPANY
SOUTH AFRICA

Bill 1 Terminal Building						
No.	Description	Unit	Qty	Rate	Install	Total
1C	EXTRACTION SYSTEMS Supply, deliver to site and install the following equipment and services.					
	Ground Floor					
	Female 02					
1C.001	Fan - Inline Tube fan : 449l/s @ 200Pa ESP : C/W AVM's and supports	No	1			
1C.002	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	No	2			
1C.003	Diffusers - 200 \emptyset Epoxy Coated Disc Valve	No	4			
1C.004	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	500x500	m	1			
	350x250	m	2			
	100x250	m	1			
	\emptyset 200	m	3			
1C.006	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, C/W , clamps, duct sealant and fixings	No	4			
1C.008	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1			
1C.009	Installation and commissioning : including all brackets, supports, etc.	No	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:	
	Male 02				
1C.010	Fan - Inline Tube fan : 466l/s @ 200Pa ESP : ^{C/W} AVM's and supports	No	1		
1C.011	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	No	2		
1C.012	Diffusers - 200ø Epoxy Coated Disc Valve	No	5		
1C.013	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	500x500	m	1		
	300x300	m	2		
	200x250	m	2		
	100x250	m	2		
	ø200	m	4		
1C.015	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^{C/W} , clamps, duct sealant and fixings	No	5		
1C.017	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1		
1C.018	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Female 01				
1C.019	Fan - Inline Tube fan : 473l/s @ 200Pa ESP : ^{C/W} AVM's and supports	No	1		
1C.020	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	No	2		
1C.021	Diffusers - 200ø Epoxy Coated Disc Valve	No	6		
				Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
1C.022	<p>Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238</p> <p>Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239</p> <p>500x500</p> <p>300x300</p> <p>160x250</p> <p>90x200</p> <p>∅200</p>	m	1		
		m	1		
		m	2		
		m	8		
		m	12		
1C.024	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^c / _w , clamps, duct sealant and fixings	No	6		
1C.026	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1		
1C.027	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Toilet 02				
1C.028	Fan - Wall mounted fan ^c / _w EPC weather louvre : 50l/s @ 50Pa ESP : AVM mounting	No	1		
1C.029	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Kitchen 02				
1C.030	Fan - Wall mounted fan ^c / _w EPC weather louvre : 50l/s @ 50Pa ESP : AVM mounting	No	1		
1C.031	Installation and commissioning : including all brackets, supports, etc.	No	1		
	ATM's				
1C.032	Fan - Inline Tube fan : 30l/s @ 200Pa ESP : ^c / _w AVM's and supports	No	1		
1C.033	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^c / _w Flexible Collars	No	2		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:		
	ATM's (continued)					
1C.034	Diffusers - 200ø Epoxy Coated Disc Valve	No	1			
1C.035	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	300x200	m	1			
	100x250	m	3			
	ø200	m	1			
1C.037	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, C/W , clamps, duct sealant and fixings	No	1			
1C.039	Weather Louvre - 300 x 200 : Epoxy Powder Coated	No	1			
1C.040	Installation and commissioning : including all brackets, supports, etc.	No	1			
	Male 03					
1C.041	Fan - Inline Tube fan : 220l/s @ 200Pa ESP : C/W AVM's and supports	No	1			
1C.042	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	No	2			
1C.043	Diffusers - 200ø Epoxy Coated Disc Valve	No	4			
1C.044	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	500x500	m	1			



AIRPORTS COMPANY
SOUTH AFRICA

1C.046	210x250	m	1		
	150x250	m	2		
	90x250	m	2		
	Ø200	m	1		
	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^c / _w , clamps, duct sealant and fixings	No	4		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:	
1C.048	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1		
1C.049	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Male 04				
1C.050	Fan -Axial Flow Fan : 555l/s @ 200Pa ESP : ^{c/w} AVM's and supports	No	1		
1C.051	Sound Attenuator - POD Type to suit Inline Tube fan : Length 1500mm : ^{c/w} Flexible Collars	No	2		
1C.052	Diffusers - 200ø Epoxy Coated Disc Valve	No	10		
1C.053	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	600x500	m	1		
	300x250	m	6		
	210x250	m	5		
	150x250	m	2		
	ø200	m	5		
1C.055	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^{c/w} clamps, duct sealant and fixings	No	10		
1C.057	Weather Louvre - 600 x 500 : Epoxy Powder Coated	No	1		
1C.058	Installation and commissioning : including all brackets, supports, etc.	No	1		
				Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
	Male 05				
1C.059	Fan - Axial Flow Fan : 540l/s @ 200Pa ESP : C/W AVM's and supports	No	1		
1C.060	Sound Attenuator - POD Type to suit Inline Tube fan : Length 1500mm : C/W Flexible Collars	No	2		
1C.061	Diffusers - 200ø Epoxy Coated Disc Valve	No	8		
1C.062	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	600x500	m	1		
	360x300	m	4		
	220x250	m	3		
	90x250	m	2		
	ø200	m	11		
1C.064	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, C/W , clamps, duct sealant and fixings	No	8		
1C.066	Weather Louvre - 600 x 500 : Epoxy Powder Coated	No	1		
1C.067	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Male 06				
1C.068	Fan - Inline Tube fan : 315l/s @ 200Pa ESP : C/W AVM's and supports	No	1		
1C.069	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	No	2		
1C.070	Diffusers - 200ø Epoxy Coated Disc Valve	No	6		
1C.071	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:	
	Male 06 (continued)					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	500x500	m	1			
	290x250	m	9			
	170x250	m	3			
	100x250	m	4			
	Ø200	m	3			
1C.073	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^C / _w , clamps, duct sealant and fixings	No	6			
1C.075	Weather Louvre - 600 x 500 : Epoxy Powder Coated	No	1			
1C.076	Installation and commissioning : including all brackets, supports, etc.	No	1			
	FIRST FLOOR					
	Ladies					
1C.077	Fan - Inline Tube fan : 270l/s @ 200Pa ESP : ^C / _w AVM's and supports	No	1			
1C.078	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^C / _w Flexible Collars	No	2			
1C.079	Diffusers - 200Ø Epoxy Coated Disc Valve	No	4			
1C.080	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	500x500	m	1			
	200x250	m	4			
	Ø200	m	4			
1C.082	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^C / _w , clamps, duct sealant and fixings	No	4			
					Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:	
1C.084	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1		
1C.085	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Store Room				
1C.086	Fan - Inline Tube fan : 20l/s @ 200Pa ESP : C/W AVM's and supports	No	1		
1C.087	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	No	2		
1C.088	Diffusers - 200ø Epoxy Coated Disc Valve	No	1		
1C.089	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	ø200	m	3		
1C.091	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, C/W , clamps, duct sealant and fixings	No	1		
1C.093	Weather Louvre - 300 x 200 : Epoxy Powder Coated	No	1		
1C.094	Installation and commissioning : including all brackets, supports, etc.	No	1		
	Gents' Cloak Room				
1C.095	Fan - Axial Flow Fan : 715l/s @ 200Pa ESP : C/W AVM's and supports	No	1		
1C.096	Sound Attenuator - POD Type to suit Inline Tube fan : Length 1500mm : C/W Flexible Collars	No	2		
				Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:		
	Gents' Cloak Room (continued)					
1C.097	Diffusers - 200ø Epoxy Coated Disc Valve	No	10			
1C.098	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	Ø500	m	7			
	Ø300	m	5			
	Ø200	m	8			
1C.100	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^c / _w , clamps, duct sealant and fixings	No	10			
1C.102	Weather Louvre - 600 x 500 : Epoxy Powder Coated	No	1			
1C.103	Installation and commissioning : including all brackets, supports, etc.	No	1			
	Male Toilet					
1C.104	Fan - Inline Tube fan : 280l/s @ 200Pa ESP : ^c / _w AVM's and supports	No	1			
1C.105	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^c / _w Flexible Collars	No	2			
1C.106	Diffusers - 200ø Epoxy Coated Disc Valve	No	4			
1C.107	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	500x500	m	1			
	Ø355	m	5			
	Ø200	m	1			
1C.109	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm - 350mm diameter and 1500mm long, ^c / _w , clamps, duct sealant and fixings	No	4			
				Carried Forward:		



AIRPORTS COMPANY
SOUTH AFRICA

						Brought Forward:	
	Male Toilet (continued)						
1C.111	Weather Louvre - 500 x 500 : Epoxy Powder Coated	No	1				
1C.112	Installation and commissioning : including all brackets, supports, etc.	No	1				
	SERVICE AND REINSTALL the following items						
1C.113	UPS Room - 500ø Axial Flow Fan	No	1				
1C.114	Transformer Room - 500ø Axial Flow Fan	No	1				
						Carried Forward to Bill 1.3 Collection:	



AIRPORTS COMPANY
SOUTH AFRICA

Bill 1	Terminal Building					
No.	Description	Unit	Qty	Rate	Install	Total
1D	VENTILATION SYSTEMS					
	Supply, deliver and install the following equipment and services.					
	Ground Floor					
	Retail Shops (3 adjacent)					
1D.001	Fan SF01.1 - Inline Tube fan : 86l/s @ 200Pa ESP : ^{c/w} AVM's and supports	Each	1			
1D.002	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{c/w} Flexible Collars	Each	2			
1D.003	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	150x150	m	7			
	100x150	m	3			
	∅100	m	1			
1D.004	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100mm diameter and 1500mm long, ^{c/w} clamps, duct sealant and fixings fixed to cassette units.	Each	3			
1D.005	Balancing Dampers - 100∅	Each	3			
1D.006	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1			
1D.007	Air Filter - 300 x 200 mm	Each	1			
1D.008	Installation and commission : including all brackets, supports, etc.	Each	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
ATNS Workshop and Rest Room					
1D.009	Fan SF02 - Inline Tube fan : 214l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1		
1D.010	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2		
1D.011	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	150x250	m	1		
	150x200	m	7		
	100x250	m	8		
	Ø100	m	3		
	Ø200	m	1		
	Ø355	m	3		
1D.012	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100mm diameter and 1500mm long, ^{C/W} clamps, duct sealant and fixings fixed to cassette units.	Each	3		
1D.013	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200mm diameter and 1500mm long, ^{C/W} clamps, duct sealant and fixings fixed to cassette units.	Each	1		
1D.014	Diffusers - 200Ø Epoxy Coated Disc Valve	Each	1		
1D.015	Balancing Dampers - 100Ø	Each	3		
1D.016	Weather Louvre - 400 x 300 : Epoxy Powder Coated	Each	1		
1D.017	Air Filter - 400 x 300 mm	Each	1		
1D.018	Installation and commission : including all brackets, supports, etc.	Each	1		
Cosmic Candy and SAA Airline Office					
1D.019	Fan SF03 - Inline Tube fan : 200l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1		
1D.020	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2		
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:	
Cosmic Candy and SAA Airline Office (continued)					
1D.021	<p>Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238</p> <p>Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239</p> <p>Ø100</p> <p>Ø250</p>	m	4		
1D.022	<p>Flexible Ducting - Wire reinforced aluminium flexible ducting : 100Ø diameter and 1500mm long, ^{C/W}, clamps, duct sealant and fixings - fixed to A/C units.</p>	Each	1		
1D.023	<p>Flexible Ducting - Wire reinforced aluminium flexible ducting : 250Ø diameter and 1500mm long, ^{C/W}, clamps, duct sealant and fixings - fixed to A/C units.</p>	Each	1		
1D.024	Balancing Dampers - 100Ø	Each	1		
1D.025	Balancing Dampers - 250Ø	Each	1		
1D.026	Weather Louvre - 400 x 300 : Epoxy Powder Coated	Each	1		
1D.027	Air Filter - 400 x 300 mm	Each	1		
1D.028	Installation and commission : including all brackets, supports, etc.	Each	1		
MTN and IT Room					
1D.029	Fan SF06 - Inline Tube fan : 90l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1		
1D.030	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2		
1D.031	<p>Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238</p> <p>Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239</p> <p>100x200</p> <p>100x150</p> <p>Ø100</p>	m	1.5		
1D.032	<p>Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 Ø, ^{C/W}, clamps, duct sealant and fixings fixed to A/C units.</p>	Each	2		
1D.033	<p>Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 Ø, ^{C/W}, clamps, duct sealant and fixings fixed to A/C units.</p>	Each	1		
				Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:		
	MTN and IT Room (continued)					
1D.034	Diffusers - 200ø Epoxy Coated Disc Valve	Each	1			
1D.035	Balancing Dampers - 200ø	Each	3			
1D.036	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1			
1D.037	Air Filter - 300 x 200 mm	Each	1			
1D.038	Installation and commission : including all brackets, supports, etc.	Each	1			
	Vodacom, Internet Cafe and Sports Shop					
1D.039	Fan SF07 - Inline Tube fan : 130l/s @ 200Pa ESP : ^{c/w} AVM's and supports	Each	1			
1D.040	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{c/w} Flexible Collars	Each	2			
1D.041	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 355mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	Ø100	m				
	Ø150	m				
	Ø200	m				
	Ø355	m				
1D.042	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 ø, ^{c/w} clamps, duct sealant and fixings fixed to A/C units.	Each	2			
1D.043	Flexible Ducting - Wire reinforced aluminium flexible ducting : 150 ø, ^{c/w} clamps, duct sealant and fixings fixed to Disc Valve/Diffuser.	Each	1			
1D.044	Diffusers - 200ø Epoxy Coated Disc Valve	Each	1			
				Carried Forward:		



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:	
Vodacom, Internet Cafe and Sports Shop (continued)						
1D.045	Balancing Dampers - 200ø	Each	3			
1D.046	Weather Louvre - 400 x 300 : Epoxy Powder Coated	Each	1			
1D.047	Air Filter - 400 x 300 mm	Each	1			
1D.048	Installation and commission : including all brackets, supports, etc.	Each	1			
VIP Lounge						
1D.049	Fan SF08 - Inline Tube fan : 150l/s @ 200Pa ESP : ^{c/w} AVM's and supports	Each	1			
1D.050	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{c/w} Flexible Collars	Each	2			
1D.051	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	150x200	m	10			
1D.052	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 ø, ^{c/w} clamps, duct sealant and fixings fixed to A/C units.	Each	1			
1D.053	Balancing Dampers - 150ø	Each	1			
1D.054	Weather Louvre - 400 x 300 : Epoxy Powder Coated	Each	1			
1D.055	Air Filter - 400 x 300 mm	Each	1			
1D.056	Installation and commission : including all brackets, supports, etc.	Each	1			
					Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:	
	Premier Lounge					
1D.057	Fan SF09 - Inline Tube fan : 190l/s @ 200Pa ESP : ^{c/w} AVM's and supports	Each	1			
1D.058	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{c/w} Flexible Collars	Each	2			
1D.059	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	100x200	m	6			
	150x200	m	2			
	200x200	m	2			
	Ø100	m	3			
	Ø350	m	6			
1D.060	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 Ø, ^{c/w} , clamps, duct sealant and fixings fixed to A/C units.	Each	3			
1D.061	Balancing Dampers - 100Ø	Each	3			
1D.062	Weather Cowl (including Wire Mesh Screen) - 355Ø : Epoxy Powder Coated	Each	1			
1D.063	Air Filter - 355Ø	Each	1			
1D.064	Installation and commission : including all brackets, supports, etc.	Each	1			
					Carried Forward:	



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:
Medical, Security and Search Rooms					
1D.065	Fan SF10 - Inline Tube fan : 115l/s @ 200Pa ESP : C/W AVM's and supports	Each	1		
1D.066	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	Each	2		
1D.067	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 150mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	140x150	m	6		
	∅150	m	1		
1D.068	Diffusers - 600 x 600 Epoxy Coated 4 Way diffusers C/W 300 high plenum and 150∅ spigot	Each	3		
1D.069	Flexible Ducting - Wire reinforced aluminium flexible ducting : 150 ∅, C/W, clamps, duct sealant and fixings fixed to Diffusers.	Each	3		
1D.070	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1		
1D.071	Air Filter - 300 x 200 mm	Each	1		
1D.072	Installation and commission : including all brackets, supports, etc.	Each	1		
Coffee Shop, 1 Time Ticket Sales and 3RD Ticket Sales					
1D.073	Fan SF11 - Inline Tube fan : 155l/s @ 200Pa ESP : C/W AVM's and supports	Each	1		
1D.074	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	Each	2		
					Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
	Coffee Shop, 1 Time Ticket Sales and 3RD Ticket Sales (continued)				
1D.075	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	150x200	m	21		
	Ø200	m	5		
1D.076	Diffusers - 200Ø Epoxy Coated Disc Valve	Each	2		
1D.077	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 Ø, ^{C/W} , clamps, duct sealant and fixings fixed to A/C units.	Each	1		
1D.078	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 Ø, ^{C/W} , clamps, duct sealant and fixings fixed to Disc Valves.	Each	2		
1D.079	Balancing Dampers - 200Ø	Each	3		
1D.080	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1		
1D.081	Air Filter - 300 x 200 mm	Each	1		
1D.082	Installation and commission : including all brackets, supports, etc.	Each	1		
	Staff Security and Firearms Locker				
1D.083	Fan SF01.2 - Inline Tube fan : 85l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1		
1D.084	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2		
1D.085	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
Carried Forward:					



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:
	Staff Security and Firearms Locker (continued)				
	∅150	m	6		
	∅100	m	1		
1D.086	Diffusers - 150∅ Epoxy Coated Disc Valve	Each	3		
1D.087	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 ∅, ^{C/W} , clamps, duct sealant and fixings fixed to A/C units.	Each	1		
1D.088	Flexible Ducting - Wire reinforced aluminium flexible ducting : 150 ∅, ^{C/W} , clamps, duct sealant and fixings fixed to Disc Valves.	Each	3		
1D.089	Balancing Dampers - 100∅	Each	4		
1D.090	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1		
1D.091	Air Filter - 300 x 200 mm	Each	1		
1D.092	Installation and commission : including all brackets, supports, etc.	Each	1		
	SAA Ticket Sales and Coupon Office				
1D.093	Fan SF05 - Inline Tube fan : 80l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1		
1D.094	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2		
1D.095	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	100x250	m	14		
	∅200	m	4		
1D.096	Diffusers - 200∅ Epoxy Coated Disc Valve	Each	3		
1D.097	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 ∅, ^{C/W} , clamps, duct sealant and fixings fixed to Disc Valves.	Each	3		
					Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:
SAA Ticket Sales and Coupon Office (continued)					
1D.098	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1		
1D.099	Air Filter - 300 x 200 mm	Each	1		
1D.100	Installation and commission : including all brackets, supports, etc.	Each	1		
FIRST FLOOR					
Airport Manager, Boardroom and Conference Room					
1D.101	Fan SF12 - Inline Tube fan : 345l/s @ 200Pa ESP : ^C / _w AVM's and supports	Each	1		
1D.102	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^C / _w Flexible Collars	Each	2		
1D.103	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238				
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239				
	425x250	m	4		
	350x350	m	3		
	150x250	m	7		
	Ø100	m	1		
1D.104	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 Ø, ^C / _w , clamps, duct sealant and fixings fixed to A/C units.	Each	3		
1D.105	Balancing Dampers - 100Ø	Each	3		
1D.106	Weather Louvre - 500 x 500 : Epoxy Powder Coated	Each	1		
1D.107	Air Filter - 500 x 500 mm	Each	1		
1D.108	Installation and commission : including all brackets, supports, etc.	Each	1		
					Carried Forward:



AIRPORTS COMPANY
SOUTH AFRICA

					Brought Forward:	
Reception, Admin and Telkom						
1D.109	Fan SF13 - Inline Tube fan : 95l/s @ 200Pa ESP : ^{C/W} AVM's and supports	Each	1			
1D.110	Sound Attenuator - POD Type to suit Inline Tube fan : Length 500mm : ^{C/W} Flexible Collars	Each	2			
1D.111	Ducting - Class 1 Rectangular Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Pressure Spiral galvanised steel ducting : 100mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	Ø200	m	14			
	Ø100	m	1			
1D.112	Diffusers - 200Ø Epoxy Coated Disc Valve	Each	2			
1D.113	Flexible Ducting - Wire reinforced aluminium flexible ducting : 100 Ø, ^{C/W} clamps, duct sealant and fixings fixed to A/C units.	Each	1			
1D.114	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200 Ø, ^{C/W} clamps, duct sealant and fixings fixed to Disc Valves.	Each	2			
1D.115	Balancing Dampers - 100Ø	Each	1			
1D.116	Weather Louvre - 300 x 200 : Epoxy Powder Coated	Each	1			
1D.117	Air Filter - 300 x 200 mm	Each	1			
1D.118	Installation and commission : including all brackets, supports, etc.	Each	1			
	SERVICE & REINSTALL the following items:					
	Viewing Deck					
1D.119	In Line Tube Fan - 315mm diameter	Each	1			
	Electronic Workshop					
1D.120	In Line Tube Fan - 315mm diameter	Each	1			
					Carried Forward to Bill 1.4 Collection:	



AIRPORTS COMPANY
SOUTH AFRICA

Bill 1	Terminal Building					
No.	Description	Unit	Qty	Rate	Install	Total
1E	BUILDER'S WORK					
1E.001	Concrete Plinths for Air Handling Unit-1 3900mm x 2830mm x 150mm	No	1			
1E.002	Concrete Plinths for Air Handling Unit-2 3900mm x 2220mm x 150mm	No	1			
1E.003	Concrete Plinths for Air Handling Unit-3 2595mm x 2005mm x 150mm	No	1			
1E.004	Concrete Plinths for Air Handling Unit-4 3748mm x 1912mm x 150mm	No	1			
1E.005	Concrete Plinths for Air Handling Unit-5 3748mm x 2218mm x 150mm	No	1			
1E.006	Concrete Plinths for Chillers 2710mm x 2555mm x 150mm	No	2			
1E.007	Concrete Plinths for Pumps 990mm x 355mm	No	2			
1E.008	Openings in brickwork for Louvers	No	20			
1E.009	Cold Drill 50mm - 100mm	No	35			
1E.010	Undercutting of Doors	No	44			
1E.012	Removal and reinstallation of ceilings	Item	1			
Carried Forward to Bill 1.5 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 2 Fire Station						
No.	Description	Unit	Qty	Rate	Install	Total
2.1	PRELIMINARY & GENERAL					
	Note: All items shall be priced for whatever cost may be considered necessary for Preliminary and General to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited, to the following:					
2.1.1	Site Establishment - over and above the Main Contractor's allowance.	Item	1			
2.1.2	Equipment and Systems operation instruction and training for Employer's staff prior to handover to the Client	Item	1			
2.1.3	Three (3) copies of O&M Manuals (Hard and Electronic copies)	Item	1			
2.1.4	"As Built" drawings (3 copies)	Item	1			
2.1.5	Provision of full Maintenance and Warranty for all installations and equipment for 12 (Twelve) months from the date of Practical Completion. Service records to be compiled and submitted for each service carried out. Refer to Tender Specification.	Item	1			
2.1.6	Allowance for Electrical Connections and CoCs	Item	1	R 70 000,00		R 70 000,00
2.1.7	Scaffolding	Item	1			
2.1.8	Cranage	Item	1			
2.1.9	Removal of existing and redundant HVAC systems.	Item	1			
2.1.10	Contingencies	PC Sum	1			
Carried Forward to Bill 2.1 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 2 Fire Station						
No.	Description	Unit	Qty	Rate	Install	Total
2.2	AIR CONDITIONING SYSTEMS Supply, Delivery and Installation of VRF Air Conditioning systems complete with indoor and outdoor units. Including trunking, piping between outdoor and indoor portions of unit, mounting brackets, condensate drain pumps and all necessary accessories. Manufacturers - Daikin, LG, Midea, Mitsubishi, Samsung or similar approved.					
2.2.1	Indoor Units VRF Mid-Wall Air Conditioning Unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries 3.6kW Heating/Cooling 4.5kW Heating/Cooling 5.6kW Heating/Cooling 7.1kW Heating/Cooling VRF Cassette Air Conditioning Unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries 8.0kW Heating/Cooling 11.2kW Heating/Cooling	Each	4			
2.2.2	Accessories Wired Remote Controller FQZHN-02D - Refnet branch joints piping kit FQZHN-03D - Refnet branch joints piping kit	No	15			
2.2.3	Outdoor Units VRF Unit C/W All necessary electrical connections, electronic control interfaces and wiring, supports, brackets and ancillaries Daikin - MV8-850WV2GN1 (PRO)	No	1			
2.2.4	Install & Commission (inclusive of all brackets, supports etc.) for each system	Each	1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
2.2.5	<p>Refrigeration Piping Suitably sized, 2 and 3 Pipe high pressure (410A quality) soft and hard drawn refrigeration piping. Insulated with pre-formed, high density, closed cell insulation as Armaflex or Equal and Approved. All insulation joints to be firmly finished with high quality contact adhesive and banded with impervious "Lasso" tape or equal approved. C/W all necessary Branch Pipe fittings, adaptors, isolators and accessories. Neatly run in approved cable trays and inclusive of all necessary supports, brackets and ancillaries.</p>				
	31,8 mm	m	10		
	25,4 mm	m	31		
	19,1 mm	m	62		
	15,9 mm	m	28		
	12,7 mm	m	93		
	9,52 mm	m	27		
	6,35 mm	m	9		
2.2.6	Supply and install Class O Armaflex closed cell, elastomeric, nitrile rubber, dust free, fibre free and CFC free with an ODP of zero insulation (please note the different refrigerant pipe sizes above)	m	260		
2.2.7	Condensate drain pipe, with support hangers and P-traps -Supply and install 25mm Ø uPVC pipe for each indoor and outdoor units complete with clamps, hangers, elbows, vents etc. Insulated.	m	130		
Carried Forward to Bill 2.2 Collection:					



AIRPORTS COMPANY
SOUTH AFRICA

Bill 2	Fire Station					
No.	Description	Unit	Qty	Rate	Install	Total
2.3	EXTRACTION SYSTEMS					
	Supply, deliver to site and install the following equipment and services.					
2.3.1	Fan EF01 Wall mounted fan ^C / _w EPC weather louvre : 120l/s @ 50Pa ESP : AVM mounting	No	3			
2.3.2	Fan EF02 Wall mounted fan ^C / _w EPC weather louvre : 100l/s @ 50Pa ESP : AVM mounting	No	3			
2.3.3	Fan EF03 Wall mounted fan ^C / _w EPC weather louvre : 140l/s @ 50Pa ESP : AVM mounting	No	4			
2.3.4	Installation and commisioning : including all brackets, supports, etc.	No	10			
Carried Forward to Bill 2.3 Collection:						

Bill 2	Fire Station					
No.	Description	Unit	Qty	Rate	Install	Total
2.4	BUILDER'S WORK					
2.4.1	Concrete Plinth - 1026mm x 2115mm x 150mm	No	1			
2.4.2	1800mm high and 7200mm perimetre Clear View Fencing with a lockable gate	No	1			
2.4.3	Openings in brickwork for fans and Louvers	No	12			
2.4.4	Cold Drill 50mm - 100mm	No	2			
2.4.5	Undercutting of Doors	No	12			
2.4.6	Removal and reinstallation of ceilings	Item	1			
Carried Forward to Bill 2.4 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 3 Control Centre						
No.	Description	Unit	Qty	Rate	Install	Total
3.1	PRELIMINARY & GENERAL					
	Note: All items shall be priced for whatever cost may be considered necessary for Preliminary and General to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited, to the following:					
3.1.2	Site Establishment - over and above the Main Contractor's allowance.	Item	1			
3.1.3	Equipment and Systems operation instruction and training for Employer's staff prior to handover to the Client	Item	1			
3.1.4	Three (3) copies of O&M Manuals (Hard and Electronic copies)	Item	1			
3.1.5	"As Built" drawings (3 copies)	Item	1			
3.1.6	Provision of full Maintenance and Warranty for all installations and equipment for 12 (Twelve) months from the date of Practical Completion. Service records to be compiled and submitted for each service carried out. Refer to Tender Specification.	Item	1			
3.1.7	Allowance for Electrical Connections and CoCs	Item	1	R 50 000,00		R 50 000,00
3.1.8	Scaffolding	Item	1			
3.1.9	Cranage	Item	1			
3.1.10	Removal of existing and redundant HVAC systems.	Item	1			
3.1.11	Contingencies	PC Sum	1			
Carried Forward to Bill 3.1 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
3.2.5	<p>Refrigeration Piping Suitably sized, 2 and 3 Pipe high pressure (410A quality) soft and hard drawn refrigeration piping. Insulated with pre-formed, high density, closed cell insulation as Armaflex or Equal and Approved. All insulation joints to be firmly finished with high quality contact adhesive and banded with impervious "Lasso" tape or equal approved. C/W all necessary Branch Pipe fittings, adaptors, isolators and accessories. Neatly run in approved cable trays and inclusive of all necessary supports, brackets and ancillaries.</p>				
	28,6 mm	m	16		
	22,2 mm	m	18		
	19,1 mm	m	6		
	15,9 mm	m	7		
	12,7 mm	m	24		
	9,52 mm	m	30		
	6,35 mm	m	8		
3.2.6	Supply and install Class O Armaflex closed cell, elastomeric, nitrile rubber, dust free, fibre free and CFC free with an ODP of zero insulation (please note the different refrigerant pipe sizes above)	m	110		
3.2.7	Condensate drain pipe, with support hangers and P-traps -Supply and install 25mm Ø uPVC pipe for each indoor and outdoor units complete with clamps, hangers, elbows, vents etc. Insulated.	m	55		
Carried Forward to Bill 3.2 Collection:					



AIRPORTS COMPANY
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Bill 3		Control Centre				
No.	Description	Unit	Qty	Rate	Install	Total
3.3	BUILDER'S WORK					
3.3.1	Concrete Plinth - 1160mm x 965mm x 150mm	No	1			
3.3.2	1800mm High and 4400mm Perimetre Clear View Security Fencing With Spikes	No	1			
3.3.3	Clear View Post Mount Swing Lockable Gate 1800mm High and 1000mm Wide	No	1			
3.3.4	Cold Drill 50mm - 100mm	No	1			
3.3.5	Removal and reinstallation of ceilings	Item	1			
Carried Forward to Bill 3.3 Collection:						



AIRPORTS COMPANY
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Bill 4		Car Rental				
No.	Description	Unit	Qty	Rate	Install	Total
4.1	PRELIMINARY & GENERAL					
	Note: All items shall be priced for whatever cost may be considered necessary for Preliminary and General to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited, to the following:					
4.1.1	Site Establishment - over and above the Main Contractor's allowance.	Item	1			
4.1.2	Equipment and Systems operation instruction and training for Employer's staff prior to handover to the Client	Item	1			
4.1.3	Three (3) copies of O&M Manuals (Hard and Electronic copies)	Item	1			
4.1.4	"As Built" drawings (3 copies)	Item	1			
4.1.5	Provision of full Maintenance and Warranty for all installations and equipment for 12 (Twelve) months from the date of Practical Completion. Service records to be compiled and submitted for each service carried out. Refer to Tender Specification.	Item	1			
4.1.6	Allowance for Electrical Connections and CoCs	Item	1	R 60 000,00		R 60 000,00
4.1.7	Scaffolding	Item	1			
4.1.8	Cranage	Item	1			
4.1.9	Removal of existing and redundant HVAC systems.	Item	1			
4.1.10	Contingencies	PC Sum	1			
Carried Forward to Bill 4.1 Collection:						



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Bill 4						
Car Rental						
No.	Description	Unit	Qty	Rate	Install	Total
4.2	<p>Fan Coil Units, VRV, Condensing Unit - Complete with drip trays, refrigerant piping, control panel, fastening and hanger supports - rigged and positioned in each rooms</p> <p>AIR CONDITIONING SYSTEMS</p> <p>Supply, Delivery and Installation of VRF Air Conditioning systems complete with indoor and outdoor units. Including trunking, piping between outdoor and indoor portions of unit, mounting brackets, condensate drain pumps and all necessary accessories. inclusive of BMS interface and connections</p> <p>Manufacturers - Daikin, LG, Midea, Mitsubishi, Samsung or similar approved.</p>					
4.2.1	<p>Indoor Units</p> <p>Ceiling Concealed, Hideaway Air Conditioning Unit C/W Wired Remote Controller and all necessary supports, brackets and ancillaries</p> <p>29.3kW Heating/Cooling</p>	No	4			
4.2.2	<p>Accessories</p> <p>Wired Remote Controller</p> <p>FQZHN-04D - Refnet branch joints piping kit</p> <p>FQZHN-03D - Refnet branch joints piping kit</p>	No	4			
4.2.3	<p>Outdoor Units</p>					
4.2.4	<p>VRF C/W All necessary electrical connections, electronic control interfaces and wiring, supports, brackets and ancillaries</p> <p>Daikin - MV8-615WV2GN1 (PRO)</p> <p>Daikin - MV8-670WV2GN1 (PRO)</p>	No	1			
		No	1			
Carried Forward:						



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Brought Forward:					
4.2.5	<p>Refrigeration Suitably sized, 2 and 3 Pipe high pressure (410A quality) soft and hard drawn refrigeration piping. Insulated with pre-formed, high density, closed cell insulation as Armaflex or Equal and Approved. All insulation joints to be firmly finished with high quality contact adhesive and banded with impervious "Lasso" tape or equal approved. C/W all necessary Branch Pipe fittings, adaptors, isolators and accessories. Neatly run in approved cable trays and inclusive of all necessary supports, brackets and ancillaries.</p>	Piping			
	38,1 mm	m	29		
	31,8 mm	m	3		
	28,6 mm	m	22		
	25,4 mm	m	6		
	19,1 mm	m	31		
	15,9 mm	m	22		
	12,7 mm	m	6		
Carried Forward:					



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Brought Forward:					
	Supply and install Class O Armaflex closed cell, elastomeric, nitrile rubber, dust free, fibre free and CFC free with an ODP of zero insulation (please note the different refrigerant pipe sizes above)	m	119		
	Condensate drain pipe, with support hangers and P-traps -Supply and install 25mm Ø uPVC pipe for each indoor and outdoor units complete with clamps, hangers, elbows, vents etc. Insulated.	m	60		
4.2.6	Supply Air Diffuser - 600 x 600/250Ø Spigot	No	26		
4.2.7	Supply Air Grille - 450 x 300/350Ø Spigot	No	12		
4.2.6	Install & Commission (inclusive of all brackets, supports etc.) for each system	No	1		
Carried Forward to Bill 4.2 Collection:					



AIRPORTS COMPANY
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Bill 4	Car Rental					
No.	Description	Unit	Qty	Rate	Install	Total
4.3	<p>EXTRACTION SYSTEMS</p> <p>Supply, deliver to site and install the following equipment and services.</p> <p>Ground Floor</p>					
4.3.1	<p>Fan EF01</p> <p>Inline Tube fan : 449245l/s @ 200Pa ESP : ^{c/w}AVM's and supports</p>	No	1			
4.3.2	<p>Sound Attenuator - Open Type to suit Inline Tube fan : Length 500mm : ^{c/w}Flexible Collars</p>	No	2			
4.3.3	<p>Diffusers - 200ø Epoxy Coated Disc Valve</p>	No	4			
4.3.4	<p>Return Air Grille - 1200 x 600/350ø Spigot</p>	No	4			
4.3.5	<p>Ducting - Class 1 Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238</p>					
	<p>Ducting - Low Pressure Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239</p>					
Carried Forward:						



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					Brought Forward:
	<p>DUCT WORK: Unless otherwise specified all sheet metal ductwork shall be supplied and installed complete with all the necessary galvanised iron rods, insulation, hangers and angle supports etc.</p>				
	1230 x 360 mm	m	1		
	500 x 400 mm	m	1		
	250 x 200 mm	m	1		
	200 x 200 mm	m	1		
	150 x 200 mm	m	3		
	100 x 200 mm	m	3		
	350 mm Diameter	m	1		
	Ø200 - Takeoff Standard	No	4		
	100 x 200 mm End cap	No	1		
	150 x 200 mm - 100 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1		
	200 x 200 mm - 150 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1		
	250 x 200 mm - 200 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1		
	250 x 200 mm - Ø350 mm Rectangular to Round Transition Angle: 45 Degree	No	1		
	500 x 400 mm - Ø350 mm Rectangular to Round Transition Angle: 45 Degree	No	1		
4.3.6	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200ø diameter and 1500mm long, ^{C/W} , clamps, duct sealant and fixings	No	4		
4.3.7	Weather Louvre - 500 x 400 : Epoxy Powder Coated	No	1		
4.3.8	Install and commission: including all brackets, supports, etc.	No	1		
Carried Forward to Bill 4.3 Collection:					



AIRPORTS COMPANY
SOUTH AFRICA

Bill 4	Car Rental					
No.	Description	Unit	Qty	Rate	Install	Total
4.4	VENTILATION SYSTEMS					
	Supply, deliver and install the following equipment and services.					
4.4.1	Fan SF01 - Inline Tube fan : 384l/s @ 200Pa ESP : C/W AVM's and supports	No	2			
4.4.2	Sound Attenuator - Open Type to suit Inline Tube fan : Length 500mm : C/W Flexible Collars	No	4			
4.4.3	Air Filter - 500 x 400 mm	No	2			
4.4.4	Ducting - Class 1 Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238					
	Ducting - Low Spiral galvanised steel ducting : 200mm - 350mm diameter, including all transformations, brackets and supports and complying with SANS1239					
	Duct Work: Unless otherwise specified all sheet metal ductwork shall be supplied and installed complete with all the necessary galvanised iron rods, insulation, hangers and angle supports etc.					
	650 x 300 mm	m	4			
	550 x 300 mm	m	9			
	500 x 400 mm	m	1			
	450 x 300 mm	m	9			
	350 x 300 mm	m	7			
	300 x 300 mm	m	2			
	300 x 250 mm	m	4			
	200 x 300 mm	m	14			
	150 x 300 mm	m	6			
	350 mm Diameter	m	1			
	250 mm Diameter	m	23			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

				Brought Forward:		
	435 x 285 mm - Takeoff Standard	No	12			
	Ø250 mm - Takeoff Standard	No	26			
	200 x 300 mm Rectangular End Cap	No	6			
	150 x 300 mm Rectangular End Cap	No	3			
	1230 x 360 mm - 650 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	4			
	650 x 300 mm - 550 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	4			
	550 x 300 mm - 450 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	4			
	450 x 300 mm - 350 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	450 x 300 mm - 300 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	450 x 300 mm - 200 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	2			
	350 x 300 mm - 250 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	350 x 300 mm - 200 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	2			
	300 x 300 mm - 200 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	250 x 300 mm - 200 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	150 x 300 mm - 200 x 300 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	250 x 300 mm Rectangular Elbow (1W)	No	1			
	300 x 250 mm - Ø350 mm Rectangular to Round Transition Angle: 45 Degree	No	1			
	500 x 400 mm - Ø350 mm Rectangular to Round Transition Angle: 45 Degree	No	1			
4.4.5	Flexible Ducting - Wire reinforced aluminium flexible ducting : 200ø diameter and 1500mm long, ^c / _w , clamps, duct sealant and fixings fixed to ceiling concealed hideaway units.	No	4			
				Carried Forward:		



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
4.4.6	Flexible Ducting - Wire reinforced aluminium flexible ducting : 250ø diameter and 1500mm long, ^C / _w , clamps, duct sealant and fixings fixed to ceiling concealed hideaway units.	No	26		
4.4.7	Balancing Dampers - 200ø	No	4		
4.4.8	Weather Louvre - 500 x 400 : Epoxy Powder Coated	No	2		
4.4.9	Supply air grille - 435 x 285 : Epoxy Powder Coated	No	12		
4.4.10	Install and commission : including all brackets, supports, etc.	No	1		
Carried Forward to Bill 4.4 Collection:					

Bill 4	Car Rental					
No.	Description	Unit	Qty	Rate	Install	Total
4.5	BUILDER'S WORK					
4.5.1	Concrete Plinths 1540mm x 2150mm x 150mm	No	1			
4.5.2	Openings in brickwork for Louvers	No	3			
4.5.3	1800mm High and 6300mm Perimetre Clear View Security Fencing With Spikes	No	1			
4.5.4	Clear View Post Mount Swing Lockable Gate 1800mm High and 1000mm Wide	No	1			
4.5.5	Cold Drill 50mm - 100mm	No	12			
4.5.6	Undercutting of Doors	No	6			
4.5.7	Removal and reinstallation of ceilings	Item	1			
Carried Forward to Bill 4.5 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 5 Ramp Handlers						
No.	Description	Unit	Qty	Rate	Install	Total
5.1	PRELIMINARY & GENERAL					
	Note: All items shall be priced for whatever cost may be considered necessary for Preliminary and General to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited, to the following:					
5.1.1	Site Establishment - over and above the Main Contractor's allowance.	Item	1			
5.1.2	Equipment and Systems operation instruction and training for Employer's staff prior to handover to the Client	Item	1			
5.1.3	Three (3) copies of O&M Manuals (Hard and Electronic copies)	Item	1			
5.1.4	"As Built" drawings (3 copies)	Item	1			
5.1.5	Provision of full Maintenance and Warranty for all installations and equipment for 12 (Twelve) months from the date of Practical Completion. Service records to be compiled and submitted for each service carried out. Refer to Tender Specification.	Item	1			
5.1.6	Allowance for Electrical Connections and CoCs	Item	1	R 60 000,00		R 60 000,00
5.1.7	Scaffolding	Item	1			
5.1.8	Cranage	Item	1			
5.1.9	Removal of existing and redundant HVAC systems.	Item	1			
5.1.10	Contingencies	PC Sum	1			
Carried Forward to Bill 5.1 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 5	Ramp Handlers					
No.	Description	Unit	Qty	Rate	Install	Total
5.2	<p>Fan Coil Units, VRV, Condensing Unit - Complete with drip trays, refrigerant piping, control panel, fastening and hanger supports - rigged and positioned in each rooms</p> <p>AIR CONDITIONING SYSTEMS</p> <p>Supply, Delivery and Installation of VRF Air Conditioning systems complete with indoor and outdoor units. Including trunking, piping between outdoor and indoor portions of unit, mounting brackets, condensate drain pumps and all necessary accessories. inclusive of BMS interface and connections</p> <p>Manufacturers - Daikin, LG, Midea, Mitsubishi, Samsung or similar approved.</p>					
5.2.1	<p>Mid-Wall Air Conditioning Unit - Indoor Unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries</p>					
	2.2kW Heating/Cooling	No	3			
	2.8kW Heating/Cooling	No	4			
	3.6kW Heating/Cooling	No	2			
	4.5kW Heating/Cooling	No	1			
	7.1kW Heating/Cooling	No	1			
5.2.2	<p>VRF Cassette Air Conditioning Unit - Indoor Unit C/W Wireless Remote Controller and all necessary supports, brackets and ancillaries</p>					
	4.5kW Heating/Cooling	No	1			
	7.1kW Heating/Cooling	No	1			
	8.0kW Heating/Cooling	No	1			
	11.2kW Heating/Cooling	No	1			
5.2.3	<p>Accessories</p>					
	Wired Remote Controller	No	15			
	FQZHN-01D - Refnet branch joints piping kit	No	5			
	FQZHN-02D - Refnet branch joints piping kit	No	1			
	FQZHN-03D - Refnet branch joints piping kit	No	8			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 5		Ramp Handlers				
No.	Description	Unit	Qty	Rate	Install	Total
5.3	EXTRACTION SYSTEMS					
	Supply, deliver to site and install the following equipment and services.					
5.3.1	Fan EF01					
	Wall mounted fan ^C / _w EPC weather louvre : 15l/s @ 50Pa ESP : AVM mounting	No	1			
5.3.2	Fan EF02					
	Ceiling mounted fan : 110l/s @ 50Pa ESP : AVM mounting	No	6			
5.3.3	Weather Louvre - 500 x 400 : Epoxy Powder Coated	No	2			
5.3.4	Install and commission : including all brackets, supports, etc.	No	7			
Carried Forward to Bill 5.3 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 5 Ramp Handlers						
No.	Description	Unit	Qty	Rate	Install	Total
5.4	VENTILATION SYSTEMS					
	Supply, deliver and install the following equipment and services.					
5.4.1	Fan SF01 - Inline Tube fan : 15l/s @ 200Pa ESP : ^{c/w} AVM's and supports	No	1			
5.4.2	Fan SF02 - Inline Tube fan : 35l/s @ 200Pa ESP : ^{c/w} AVM's and supports	No	1			
5.4.3	Sound Attenuator - Open Type to suit Inline Tube fan SF01 : Length 500mm : ^{c/w} Flexible Collars	No	2			
5.4.4	Sound Attenuator - Open Type to suit Inline Tube fan SF02 : Length 500mm : ^{c/w} Flexible Collars	No	2			
5.4.5	Air Filter - 300 x 200	No	2			
5.4.6	Ducting - Class 1 Low Pressure galvanised steel ducting, including all transformations, brackets and supports and complying with SANS1238.All ducts shall be acoustic insulated complete with clips					
	DUCT WORK: Unless otherwise specified all sheet metal ductwork shall be supplied and installed complete with all the necessary galvanised iron rods, insulation, hangers and angle supports etc.					
	150 x 200 mm	m	7			
	100 x 200 mm	m	4			
	100 x 200 mm Rectangular End Cap	No	2			
	Ø150 - Takeoff Standard	No	3			
	150 x 200 mm - Ø250 mm Rectangular to Round Transition Angle: 45 Degree	No	4			
	300 x 200 mm - 100 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	300 x 200 mm - 150 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	150 x 200 mm - 100 x 200 mm Rectangular Transition Angle: 45 Degree (1W)	No	1			
	150 x 200 mm Rectangular Elbow (1W)		1			
Carried Forward:						



AIRPORTS COMPANY
SOUTH AFRICA

Brought Forward:					
5.4.7	Flexible Ducting - Wire reinforced aluminium flexible ducting 1500 mm : 200 ϕ , C/W , clamps, duct sealant and fixings fixed to A/C units.	No	3		
5.4.8	Diffusers - 200 ϕ Epoxy Coated Disc Valve	No	3		
5.4.9	Weather Louvre - 300 x 200 : Epoxy Powder Coated	No	2		
5.4.10	Install and commission : including all brackets, supports, etc.	No	2		
Carried Forward to Bill 5.4 Collection:					

Bill 5 Ramp Handlers						
No.	Description	Unit	Qty	Rate	Install	Total
5.5	BUILDER'S WORK					
5.5.1	Concrete Plinths - 1025mm x 1540mm x 150mm	No	1			
5.5.2	1800mm High and 4600mm Perimetre Clear View Security Fencing With Spikes	No	1			
5.5.3	Clear View Post Mount Swing Lockable Gate 1800mm High and 1000mm Wide	No	1			
5.5.4	Openings in brickwork for Louvers and Wall mounted Fans	No	5			
5.5.5	Core Drill 50mm - 100mm	No	1			
5.5.6	Undercutting of Doors	No	3			
5.5.7	Removal and reinstallation of ceilings	Item	1			
Carried Forward to Bill 5.5 Collection:						



AIRPORTS COMPANY
SOUTH AFRICA

Bill 6	HVAC Essential Supply Connections					
No.	Description	Unit	Qty	Rate	Install	Total
6,1	Electrical Connections Terminate and make good Normal Supply connections to HVAC equipment. Connect HVAC equipment to Essential Supply circuits on the DB board CBs for the following Areas					
6,1,1	Electrical Sub-Station	No	2			
6,1,2	Wire Control Centres	No	6			
6,1,3	UPS Rooms	No	2			
6,1,4	Electrical CoCs	No	3			
6,1,5	Testing on the HVAC Units on power failure	No	1			
Carried Forward to Bill 6,1 Collection:						

PART C3: SCOPE OF WORKS

Document reference	Title	No of pages
C3.1	This cover page	1
	Scope of Works	3
	Total number of pages	4

C3.1. Scope of Works

1. Description of the works

This contract is for upgrading of the HVAC services and systems at the East London Airport.

The HVAC systems shall include Heating, Ventilating and Air Conditioning in the following areas:

- a) Main Terminal Building
- b) Fire Station Building
- c) Ramp Handling Building
- d) PIDS Control Room
- e) Car Rentals Building

The works carried out under this contract shall be governed by the standard specifications and the detailed description of the work.

The Scope of Works electronic documents are attached separately

2. Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
ACSA	Airports Company South Africa SOC Limited
ISO	International Standards Organisation
IEC	International Electrotechnical Commission
Engineer	Carifro Consulting Consulting Engineers
SANS	South African National Standard
ASHRAE	American Society of Heating, Refrigeration and Air conditioning Engineers

3. Contract Management

Management meetings

The Contractor will be expected to attend meetings relating to operations, contract management and other issues that may arise from time to time. As far as is practicable, the Contractor will make all required persons available for these meetings. The Contractor shall not submit claims for payment for staff attending any of these meetings.

Regular meetings of a general nature may be convened and chaired by the Project Manager as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Once a Month	To be confirmed	Project Manager and Contractor
Overall contract progress and feedback	Twice a Month Fortnightly	To be confirmed	Project Manager, Contractor and Supervisor

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the works. Records of these meetings shall be submitted to the Project Manager by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

Health and safety risk management

The Contractor complies with the health and safety requirements contained in this document. The Project Manager is entitled to fine the Contractor an amount of R3,000.00 for each non-conformance to Health and Safety matters. This shall not transfer any of the Contractor's responsibilities in this regard to the Employer by any means.

The Contractor is entirely responsible for compliance to the Occupational Health and Safety Act for all persons, equipment, and installations relating to this Contract. The Contractor is expected to sign the undertaking in this regard as attached in the annexes.

It shall be the Contractor's responsibility to ensure that all relevant labour and safety legislation is adhered to in rostering staff.

All persons on company premises shall obey all health and safety rules, procedures, and practices. In particular, NO SMOKING signs and the prohibition of the carrying of smoking materials in designated areas shall always be obeyed. A copy of the Safety Rules booklet is available on request from the ACSA Safety Department.

All the applicable requirements of the Occupational Health and Safety Act (1993) and Regulations and any amendments thereto, shall be met. Where the OHS Act prescribes certification of competency of persons performing certain tasks, proof of such certification shall be provided to the Project Manager.

The contractor's Workmen's Compensation fees must be up to date. A copy of the Contractor's WCA registration shall be produced on request.

The following areas in the company are declared as "HOT WORKS PERMIT" areas:

- All airside areas
- All areas accessible to the public
- All enclosed areas
- The terminal building

Any process in the above mentioned areas involving open flames, sparks, or heat shall be authorised by the issue of a permit to work - obtainable from the ACSA Safety department. Any work done under the protection of a permit to work shall be in strict compliance with every prescription regarding the permit.

Safety equipment shall be used where applicable (e.g. safety, goggles, boots, harness, etc.) The Contractor, at his/her own expense shall provide such equipment, for his/her employees. The Contractor shall apply the necessary discipline and control to ensure compliance by his workers.

All Contractors must ensure that his/her employees are familiar with the existing emergency procedures and must co-operate in any drills or exercises, which might be held. Emergency / fire equipment and extinguishers shall not be obstructed at any time

No person shall perform an unsafe / unhygienic act or operation whilst on Company premises.

No unsafe/dangerous equipment or tools may be brought onto or used on Company premises. The Company reserves the right to inspect all equipment/tools at any time and to prevent/prohibit their use, without any penalty to the Company and without affecting the terms of the Contract in any way.

The Company reserves the right to act in any way to ensure the safety/security of any persons, equipment, or goods on its premises and will not be liable for any cost or loss evoked by the action. This includes the right to search all vehicles and persons entering, leaving or on the premises and to inspect any parcel, package, handbag and pockets. Persons who are not willing to permit such searches may not bring any such items or vehicles onto the premises.

The Contractor shall maintain good housekeeping standards in the area where he is working for the duration of the contract.

At no time must the Contractor interfere with, or put at risk, the functionality of any fire prevention system. Care must also be taken so as to prevent fire hazards.

The Contractor is required to issue all staff with standard uniforms. This shall as a minimum include: safety shoes, overalls (clearly marked with Contractor's company logo) and numbered reflective jackets (as per Airport requirements). All costs relating to uniforms shall be for the Contractor's account.

Environmental constraints and management

The Contractor shall comply with the environmental criteria and constraints stated in document and attached to this Works Information"

Quality assurance requirements

The project shall be managed in accordance with strict ISO 9001 quality system ensuring quality in design, administration, reports, and site administration. The Contractor must be accredited with ISO9001 compliance and each project shall be administrated with respect to quality and technical compliance, in accordance with these strict International Quality Procedures

Within the period stated in the Contact Data, the Contractor submits his complete quality control and assurance system (with all quality control and assurance procedures and manuals) for review and acceptance by the Employer. The manual includes pro-forma checklists for all requirements of the Contractor's quality control and assurance program and those called for in the Scope.

Acceptance by the Employer of the Contractor's quality assurance programme, quality plan, and/or inspection and/or test plans, or of those of his Subcontractors will not relieve the Contractor of his obligation to provide services which meet the requirements of the Contract.

Storage

ACSA does not provide storage of the parts at the airport premises. It is the contractor's responsibility to move the parts from his own store to the installation sites.

On site storage may be agreed with ACSA. However, the Contractor cannot be guaranteed that this is the case.

Disposal

The Contractor is required to remove and safely dispose of any identified and redundant units.

All refrigeration gasses will be recovered in compliance with the current regulations and shall be safely disposed of in the same manner. A disposal certificate will be required by the employer.

In a case where the disposal will result in revenue generated, the Contractor shall reimburse ACSA in a form of a discount/credit in the BOQ.

Training workshops and technology transfer

The Contractor shall be responsible for conducting an on-site training (or off-site training should the Contractor be in position of a training facility) on the maintenance, inspection and troubleshooting of air conditioning and ventilation systems to the ACSA maintenance team (ACSA maintenance staff and contractor employed by ACSA for the maintenance of HVAC systems). The training should aim at aiding the ACSA maintenance team to be able to independently conduct routine preventative maintenance, inspections and troubleshooting on the installed HVAC systems and equipment in line with the OEM requirements. The maintenance team will comprise of seven (7) personnel.

Programme

The programme submitted should the tenderer be appointed shows the following information as detailed hereafter.

The Contractor supplies with his offer an outline programme for each area indicating the time required to complete work in each of the areas. Commencement and completion dates for each of the areas will form part of this offer and will be deemed to bind the Contractor.

Before completing the programme attention is drawn to the importance of meeting agreed deadlines and ensuring that where work is completed and access is to be granted to finishing and room fitting trades, all pipe work has been vacuum tested and has maintained the imposed vacuum for a period of not less than 24 hours.

MAIN TERMINAL BUILDING HVAC SERVICES

- Submit detailed system design for approval
 - Check and report on the existing chilled water system components and accessibility
 - Submit workshop drawings for approval
 - Approval of workshop drawings (allow 1 week)
 - Submit details of all builder's work
 - Approval of builder's work items (allow 1 week)
 - Establishment on site and delivery of materials
 - Procurement of materials
 - Supply of all components to be built in by Building Contractor and setting out on site
 - Inspection of all completed Builder's Work
 - Installation of HVAC equipment and all ancillary components
 - Wiring and Installation of sensor and line device bases.
 - Fitting of sensors and control devices
 - Testing and commissioning of systems
 - Interface with fire protection systems
 - Partial handover process (beneficial occupation)
 - Snagging and final Completion inspections
 - All corrective work to ensure that area performance and integrity complies with specified capacity.
 - Setting into operation.
 - Hand over to Client
- **FIRE STATION BUILDING**
 - Submit detailed VRF system design for approval
 - Submit workshop drawings for approval
 - Approval of workshop drawings (allow 1 week)
 - Submit details of all builder's work
 - Approval of builder's work items (allow 1 week)
 - Establishment on site and delivery of materials
 - Procurement of materials
 - Supply of all components to be built in by Building Contractor and setting out on site
 - Inspection of all completed Builder's Work
 - Installation of HVAC equipment and all ancillary components
 - Wiring and Installation of sensor and line device bases.
 - Fitting of sensors and control devices
 - Testing and commissioning of systems
 - Interface with fire protection systems
 - Partial handover process (beneficial occupation)
 - Snagging and final Completion inspections
 - All corrective work to ensure that area performance and integrity complies with specified capacity.
 - Setting into operation.
 - Hand over to Client
- **RAMP HANDLING BUILDING**
 - Submit detailed VRF system design for approval
 - Submit workshop drawings for approval
 - Approval of workshop drawings (allow 1 week)
 - Submit details of all builder's work
 - Approval of builder's work items (allow 1 week)
 - Establishment on site and delivery of materials
 - Procurement of materials
 - Supply of all components to be built in by Building Contractor and setting out on site
 - Inspection of all completed Builder's Work
 - Installation of HVAC equipment and all ancillary components
 - Wiring and Installation of sensor and line device bases.
 - Fitting of sensors and control devices
 - Testing and commissioning of systems
 - Interface with fire protection systems
 - Partial handover process (beneficial occupation)
 - Snagging and final Completion inspections
 - All corrective work to ensure that area performance and integrity complies with specified capacity.

- Setting into operation.
- Hand over to Client
- **PIDS CONTROL BUILDING**
 - Submit detailed VRF system design for approval
 - Submit workshop drawings for approval
 - Approval of workshop drawings (allow 1 week)
 - Submit details of all builder's work
 - Approval of builder's work items (allow 1 week)
 - Establishment on site and delivery of materials
 - Procurement of materials
 - Supply of all components to be built in by Building Contractor and setting out on site
 - Inspection of all completed Builder's Work
 - Installation of HVAC equipment and all ancillary components
 - Wiring and Installation of sensor and line device bases.
 - Fitting of sensors and control devices
 - Testing and commissioning of systems
 - Interface with fire protection systems
 - Partial handover process (beneficial occupation)
 - Snagging and final Completion inspections
 - All corrective work to ensure that area performance and integrity complies with specified capacity.
 - Setting into operation.
 - Hand over to Client
- **CAR RENTALS BUILDING**
 - Submit detailed VRF system design for approval
 - Submit workshop drawings for approval
 - Approval of workshop drawings (allow 1 week)
 - Submit details of all builder's work
 - Approval of builder's work items (allow 1 week)
 - Establishment on site and delivery of materials
 - Procurement of materials
 - Supply of all components to be built in by Building Contractor and setting out on site
 - Inspection of all completed Builder's Work
 - Installation of HVAC equipment and all ancillary components
 - Wiring and Installation of sensor and line device bases.
 - Fitting of sensors and control devices
 - Testing and commissioning of systems
 - Interface with fire protection systems
 - Partial handover process (beneficial occupation)
 - Snagging and final Completion inspections
 - All corrective work to ensure that area performance and integrity complies with specified capacity.
 - Setting into operation.
 - Hand over to Client

The Contractor's Personnel

A schedule of key personnel to this Contract will be provided to the Project Manager at commencement of this Contract. This will, as a minimum, include all persons from technician/artisan level to management level. For the full duration of this Contract, none of these persons will be replaced by a person of lesser ability or qualification. All on-site staff leaves shall be reported and agreed with the Project Manager. The Project Manager may request the replacement of any person with unsatisfactory performance or fails to comply with this contract.

It is the contractor's responsibility to ensure that there is always sufficient competent staff to perform the works as planned. It shall be the Contractor's responsibility to ensure that all relevant labour and safety legislation is adhered to in rostering staff.

All key personnel are required to have personal access permit to access the site.

The Contractor shall not be compensated for costs relating to ACSA required permits, nor for labour/time spent in obtaining it. An allowance must be made in the tender price in this regard.

The Contractor must ensure that he/she is, at all times, familiar with ACSA's safety and security requirements relating to permits in order for no work to be delayed as a result thereof. This will include the permit application process.

Note that (within reason) the Contractor will have no claim against ACSA in the event that a permit request is refused.

The following table is not all inclusive, but is provided for illustration purposes:

Permit	Required by/for	Department
AVOP – Airside Vehicle Operator permit	All drivers of vehicles on airside	ACSA Safety
Airside Vehicle Permit	All vehicles that enter airside	ACSA Safety
Parking permit	All vehicles allowed to enter the secured parking	ACSA Parking
Personal permit	All persons employed on the airport	ACSA Security
Cell phone permit	All persons taking cell phones to airside	ACSA Security
Lap top permit	All persons taking lap top computers to airside	ACSA Security
Camera permit	All persons taking cameras or camera equipment to airside	ACSA Security
Hot Works Permit	All welding and/metal cutting work	ACSA Safety

Proof of having attended the airside induction training course is required for all personal permit applications. Persons applying for an AVOP must provide proof of having attended an AVOP course. Fees are levied for these courses. Fees are further levied for all permit renewals and refresher courses - where applicable

Subcontracting

Should any part of the works be subcontracted, the Contractor is solely responsible for all Works as if it was done so by the Contractor.

No casual labour (i.e. "off the street" labour) may be employed by the Contractor unless prearranged with ACSA. Whenever this is required, the Contractor shall come to a suitable arrangement with ACSA regarding sourcing and screening of such individuals.

Insurance provided by the *Employer*

The Employer will provide the following insurances whilst the Contractor will be responsible for the excess

Provision of bonds and guarantees

Without limitation to the Employer's rights under the Contract, the *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*

The Contractor's defined costs are stated in the Bills of Quantities as well as the fee and hourly rates.

Training workshops and technology transfer

The Contractor will allow for training of the ACSA appointed personnel in the correct operation and maintenance of the fire and evacuation systems (ACSA staff and contractor employed by ACSA for the operation and/or maintenance of fire systems). The Contractor shall use only competent staff to carry out training and where a company has been specified to carry out commissioning the same company must be used by the Contractor to carry out Operation and Maintenance Training.

In broad terms training must cover the same subject contents in the Operating and Maintenance Manuals in sufficient detail for the staff to be able to perform all the required adjustments and operations without third party assistance. The training should aim at aiding the ACSA maintenance team to be able to independently conduct routine preventative maintenance, inspections and troubleshooting on the system installed

4. Engineering and design of the works

Employer's design

This is the detailed design for upgrading of the HVAC systems in the designated areas at the East London Airport.

The HVAC systems are specific to the areas and zones which they service. The Main Terminal Building is serviced by a combination of an expansion and upgrade of the existing chilled water system and addition of dedicated Variable Refrigerant Flow (VRF) systems serving independent areas.

All peripheral buildings will be provided with dedicated Variable Refrigerant Flow (VRF) systems serving individual internal zones.

Air conditioned space will be controlled by independent thermostat controllers, which shall be wall mounted or remote.

Fresh air is provided to all occupied zones by dedicated ventilation systems with airflow quantities complying to regulations.

Exhaust air from all ablutions and service areas is by dedicated extraction systems, correctly sized for that purpose.

4.1. Applicable Standard Specifications

Unless otherwise specified the work complies with the following standard specifications:

SANS Standard Specifications:

- SANS 10400 The Application of the National Building Regulations
- SANS 10400 The application of the National Building Regulations Part T: Fire Protection
- SANS 10142 The wiring of premises
- SANS 10252 Water supply and drainage for buildings
- SANS 14788 Continuous hot-dip zinc-5 % aluminium alloy coated steel sheet

ISO Standard Specifications:

- ISO 965 ISO general purpose metric screw threads
- ISO 1461 Hot dip galvanized coatings on fabricated iron and steel articles
- ISO 3575 Continuous hot-dip zinc-coated carbon steel sheet of commercial and drawing qualities
- ISO 14713 Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures

National Regulations and Specifications:

- The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended,
- The Fire Brigade services Act 1993 Act 99 of 1987 as amended,
- The Electricity Act 1984 (Act 41 of 1984) as amended and
- The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended,
- The Post Office Act 1958 (Act 44 of 1958) as amended, and
- The Regulations of the local Gas Board where applicable.
- The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority,

4.2. Scope of Work

The work to be performed comprises:

The supply, delivery, offloading, interim storage, installation, testing, commissioning and leaving in good working order of the HVAC Systems at the East London Airport;

Provision of all guarantees as specified herein;

Supply of 'AS BUILT' installation record drawings;

Maintenance and Operating Manuals;

Sign-Off Forms and documentation in accordance with the specifications and requirements for:

- a) Upgrading and extensions of the HVAC systems in the Main Terminal building at the East London Airport.
- b) Supply and installation of VRF HVAC systems in the Ramp Handling building at the East London Airport
- c) Supply and installation of VRF HVAC systems in the Fire Station building at the East London Airport.
- d) Supply and installation of VRF HVAC systems in the PIDS Control Room at the East London Airport.
- e) Supply and installation of VRF HVAC systems in the Rentals Building at the East London Airport.

Full scope of works documentation is provided as addenda to this document.

4.3. Systems Operation

HVAC Systems

Chilled Water Air Conditioning System – Main Terminal Building

The redundant Air Handling Units (AHU's) will be replaced by adequately sized and modern AHU's to serve the areas identified in drawings provided.

Each AHU is sized to provide the correct cooling requirements and is supported by integrated electric heater banks to accommodate any low temperature variations that may be experienced.

Control of space conditions is maintained by wall mounted thermostatic controllers in each conditioned space.

Variable Refrigerant Flow (VRF) Systems - Main Terminal Building, Fire Station, Ramp Handlers, Control Room and Car rental Buildings.

A number of VRF systems are provided to maintain individual space conditions for retail and administrative occupants.

The "Heat Recovery" function of this type of air conditioning system allows simultaneous heating and cooling demands to be met in individual zones. All space conditions are controlled by wall mounted or remote thermostatic controllers.

All air conditioning and ventilation (fresh air supply and extraction) are available without time restriction.

All HVAC systems and equipment is to be interfaced with the Fire Protection Services to ensure air flow is stopped in the event of a fire condition.

5. Procurement

Personnel:

Minimum requirements of people employed on the Site

No casual labour (i.e. "off the street" labour) may be employed by the Contractor unless prearranged with ACSA. Whenever this is required, the Contractor shall come to a suitable arrangement with ACSA regarding sourcing and screening of such individuals.

6. Construction

Temporary works, Site services & construction constraints

The Contractor is only permitted to work on the airside during times when the airport is not in operation. The contractor is permitted to work on the land side subject to ACSA's restrictions where these are imposed so as not affect the Terminal operation or any other airport function.

Employer's Site entry and security control, permits, and Site regulations

Any work on the airside is subject to the Contractor 's staff being permitted to work on the airside after AIT certification.

Any work on the landside is subject to a programme agreed with ACSA.

All of the Contractor's staff wears safety clothing with clear identification

Restrictions to access on Site, roads, walkways and barricades

Parking and access on site is agreed with ACSA after appointment of the Contractor.

Access and access times to the airside are subject to prior agreement with ACSA

People restrictions on Site; hours of work, conduct and records

Access and working hours restriction are as agreed with ACSA

Title to materials from demolition and excavation

All materials and equipment removed from any installation are the property of ACSA and are handed back to ACSA. If ACSA does not require further use of any materials or equipment removed, ACSA instructs the Contractor to dispose of the materials and equipment and where applicable to provide a disposal certificate.

Contractor's Equipment

The Contractor uses only his own equipment which is in a suitable condition for use in the application where it is to be used.

Equipment provided by the Employer

The Employer does not provide any equipment. All equipment is provided by the Contractor

Site services and facilities provided by the Employer

The *Employer* does not provide any services or facilities save single phase power from available points.

Facilities provided by the Contractor

Not applicable

Existing premises, inspection of adjoining properties and checking work of Others

The Contractor arranges inspection of existing premises and supplies condition reports for approval by the Project Manager and Supervisor prior to commencing any work in the specific premises

Setting out of the works

Not applicable

Site conditions and requirements

The Contractor is mindful that his work is undertaken in a working airport and interference with any airport systems is not permitted as it is likely to endanger the safety of passengers in transit.

Construction requirements

The Contractor is required to commence and complete each autonomous section in the shortest possible time as incomplete work affects the Terminal operation

Completion, testing, commissioning and correction of Defects

Refer to testing and commissioning

Work to be done by the Completion Date

All work to be done by the Contractor is completed by the Completion Date

The *Project Manager* cannot certify Completion until all the work has been completed and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and Others from doing their work.

Use of the works before Completion has been certified

Use of portions of the works of the works before Completion is agreed by the Contractor with the Project Manager.

Sectional Completion is possible and is dependent on the programme agreed with the Project Manager.

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 OF 1993) & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist Airport Company South Africa (ACSA) in order to comply with the requirements of:

- 3. The Occupational Health & Safety (Act 85 of 1993) and its regulations and
- 4. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organisation: AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED EAST LONDON AIRPORT
Physical Address: East London Airport 66 Settlers Way, East London, Eastern Cape, 5201

Hereinafter referred to as “Client”

Name of organisation:
Physical Address:

Hereinafter referred to as “the Mandatory/ Principal Contractor”

MANDATORY'S MAIN SCOPE OF WORK**GENERAL INFORMATION FORMING PART OF THIS AGREEMENT**

1. The Occupational Health & Safety Act comprises of SECTION 1-50 and all un-repealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.
2. "Mandatory" is defined as including as agent, a principal contractor or a contractor for work, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant
3. Section 37 of the Occupational Health & Safety Act potentially punishes Employers (PRINCIPAL CONTRACTOR) for unlawful acts or omissions of Mandataries (CONTRACTORS) save where a Written Agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATORY.
4. All documents attached or refer to in the above Agreement form an integral part of the Agreement.
5. To perform in terms of this agreement Mandataries must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.
6. Mandatories who utilise the services of their own Mandatories (contractors) must conclude a similar Written Agreement with them.
7. Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.
8. This Agreement shall be binding for all work the Mandatory undertakes for the client.
9. All documentation according to the Safety checklist including a copy of the written Construction Manager appointment in terms of construction regulation 8, must be submitted 7 days before work commences.

THE UNDERTAKING

The Mandatory undertakes to comply with:

INSURANCE

1. The Mandatory warrants that all their employees and/or their contractor's employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client's premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor is in good standing with the Compensation Fund or Licensed Insurer.
2. The Mandatory warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client's premises, or which shall remain in force for that duration of their contractual relationship with the Client, whichever period is the longest.
 - a. Public Liability Insurance Cover as required by the Subcontract Agreement.
 - b. Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

The Mandatory undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will at all times comply with the following conditions:

1. All work performed by the Mandatory on the Client's premises must be performed under the close supervision of the Mandatory's employees who are to be trained to understand the hazards associated with any work that the Mandatory performs on the Client's premises.
2. The Mandatory shall be assigned the responsibility in terms of Section 16(1) of the OHS Act 85 of 1993, if the Mandatory assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatory shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatory shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
5. The Mandatory shall appoint competent persons who shall be trained on any Occupational Health & Safety aspect pertaining to them or to the work that is to be performed.
6. The Mandatory shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
7. Any personal protective equipment required shall be issued by the Mandatory to his/her employees and shall be worn at all times.

8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
9. No unsafe equipment/machinery and/or articles shall be used by the Mandatory or contractor on the Client's premises.
10. All incidents/accidents referred to in OHS Act shall be reported by the Mandatory to the Provincial Director: Department of Labour as well as to the Client.
11. No user shall be made by the Mandatory and/or their employees and or their subcontractors of any of the Client's machinery/article/substance/plant/personal protective equipment without prior written approval.
12. The Mandatory shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duly completed approved permit.
13. The Mandatory shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client's premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
14. Full participation by the Mandatory shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.

FURTHER UNDERTAKING

1. Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatory. The signing power of this representative must be designated in writing by the Chief Executive Officer of the Mandatory. A copy of this letter must be made available to the Client.
2. The Mandatory confirms that he has been informed that he must report to the Client's management, in writing anything he/she deems to be unhealthy and /or unsafe. He has versed his employees in this regard.
3. The Mandatory warrants that he/she shall not endanger the health & safety of the Client's employees and other persons in any way whilst performing work on the Client's premises.
4. The Mandatory understands that no work may commence on the Client's premises until this procedure is duly completed, signed and received by the Client.
5. Non-compliance with any of the above clauses may lead to an immediate cancellation of the contract.

ACCEPTANCE BY MANDATORY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

Ia duly authorised 16.2 Appointee acting for and on behalf of

.....(company name) undertake to ensure that the requirements and the provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatory – WCA/ Federated Employers Mutual No.....

Expiry date

SIGNATURE ON BEHALF OF MANDATORY
(Warrant his authority to sign)

DATE

SIGNATURE ON BEHALF OF THE CLIENT
AIRPORT COMPANY SOUTH AFRICA

DATE

ANNEXURE B:

ENVIRONMENTAL TERMS AND CONDITIONS - EMS 048

The following Environmental Terms and Conditions shall be strictly adhered to by all contractors when conducting works for ACSA. ACSA shall audit contractor activities, products and services on an ad hoc basis to ensure compliance to these environmental conditions. Any pollution clean-up costs shall be borne by the contractor.

ISSUE	REQUIREMENT
Environmental Policy	ACSA's Environmental Policy shall be communicated, comprehended and implemented by all ACSA appointed contractor staff.
Storm water, Soil and Groundwater Pollution	<ul style="list-style-type: none"> • No solid or liquid material may be permitted to contaminate or potentially contaminate storm water, soil or groundwater resources. • Any pollution that risks contamination of these resources must be cleaned-up immediately. Spills must be reported to ACSA immediately. Contractors shall supply their own suitable clean-up materials where required. • Washing, maintenance and refuelling of equipment shall only be allowed in designated service areas on ACSA property. It is the contractor's responsibility to determine the location of these areas. • No leaking equipment or vehicles shall be permitted on the airport.
Air Pollution	<ul style="list-style-type: none"> • Dust: Dust resulting from work activities that could cause a nuisance to employees or the public shall be kept to a minimum. • Odours and emissions: All practical measures shall be taken to reduce unpleasant odours and emissions generated from work related activities. • Fires: No open fires shall be permitted on site.
Noise Pollution	<ul style="list-style-type: none"> • All reasonable measures shall be taken to minimize noise generated on site due to work operations. • The Contractor shall comply with the applicable regulations regarding noise.
Waste Management	<ul style="list-style-type: none"> • Waste shall be separated as general or hazardous waste. • General and hazardous waste shall be disposed of appropriately at a permitted landfill site should recycling or re-use of waste not be feasible. • Under no circumstances shall solid or liquid waste be dumped, buried or burnt. • Contractors shall maintain a tidy, litter free environment always in their work area. • Contractors must keep on file: <ol style="list-style-type: none"> 1. The name of the contracting waste company 2. Waste disposal site used 3. Monthly reports on quantities – separated into general, hazardous and recycled 4. Maintained file of all Waste Manifest Documents and Certificates of Safe Disposal 5. Copy of waste permit for disposal site <p>This information must be available during audits and inspections.</p>

<p>Handling & Storage of Hazardous Chemical Substances (HCS)</p>	<ul style="list-style-type: none"> • All HCS shall be clearly labelled, stored and handled in accordance to Materials Safety Data Sheets. • Materials Safety Data Sheets shall be stored with all HCS. • All spillages of HCS must be cleaned-up immediately and disposed of as hazardous waste. (HCS spillages must be reported to ACSA immediately). • All contractors shall be adequately informed with regards to the handling and storage of hazardous substances. • Contractors shall comply with all relevant national, regional and local legislation regarding the transport, storage, use and disposal of hazardous substances.
<p>Water and Energy Consumption</p>	<p>ACSA promotes the conservation of water and energy resources. The contractor shall identify and manage those work activities that may result in water and energy wastage.</p>
<p>Training & Awareness</p>	<p>The conditions outlined in this permit shall be communicated to all contractors and their employees prior to commencing works at the airport.</p>

Penalties

Penalties shall be imposed by ACSA on Contractors who are found to be infringing these requirements and/or legislation. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall take the necessary steps (e.g. training/remediation) to prevent a recurrence of the infringement and shall advise ACSA accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings, the Council, authorities, land owners and/or members of the public may institute against the Contractor.

Penalties shall be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by ACSA's Airport Environmental Management Representative in consultation with the Airport Manager or his/her designate, and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused due to the infringement at his/her own expense.

I, of agree to the above conditions and acknowledge ACSA's right to impose penalties should I or any of my employees or sub-contractors fail to comply with these conditions.

Signed: _____ on this date: _____ (dd/mm/yyyy)

at: