



NEC3 Engineering & Construction Contract

**Between Airports Company South Africa
(Registration no: 1993/004149/06)**

and _____

(Reg No. _____)

**for The Construction of Mechanical HVAC installation
and associated Electrical Services for the
refurbishment of the ACSA Airside Office Building
for Period of 12 Months.**

Contents:	No of pages
Part C1 Agreements & Contract Data	[35]
Part C2 Pricing Data	[21]
Part C3 Scope of Work	[18]
Part C4 Site Information	[1]
Part C5 Annexures	[139]

CONTRACT No. _____

Part C1: Agreements & Contract Data

Contents:	No of pages
C1.1 Form of Offer and Acceptance	[3-4]
C1.2a Contract Data provided by the <i>Employer</i>	[8-27]
C1.2b Contract Data provided by the <i>Contractor</i>	[28-30]
C1.3 Proforma Guarantees	[31-35]

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:

The Construction of Mechanical HVAC installation, and associated Electrical Services for the refurbishment of the ACSA Airside Office Building for Period of 12 Months

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto 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.

Options B	The offered total of the Prices exclusive of VAT is	R
	Sub total	R
	Value Added Tax @ 15% is	R
	The offered total of the amount due inclusive of VAT is ¹	R
	(in words)	

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

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

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 at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

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

**for the
Employer**

Airports Company South Africa,
Cape Town International Airport
Southern Office Block, Administration Building
7525

Name &
signature of
witness

Date

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.

Schedule of Deviations to be completed by the *Employer* prior to contract award

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender 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 Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Tenderer:**For the Employer**

Signature

Name

Capacity

On behalf
ofName &
signature
of witness*(Insert name and address of organisation)*

Airports Company South Africa,
Cape Town International Airport
Southern Office Block, Administration
Building
7525

Date

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*.

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		B: Priced contract with bill of quantities
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X2 Changes in the law
		X7: Delay damages
		X16: Retention
		X17: Low performance damages
		X18: Limitation of liability
		Z: Additional conditions of contract
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Airports Company South Africa SOC Limited (reg. no: 1993/004149/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Airports Company South Africa SOC Limited Cape Town International Airport Private Bag X9002, Cape Town 7525
10.1	The <i>Project Manager</i> is: (Name)	: 2BLN (PTY) LTD
	Address	: 498 Knobwood Ave Thatchfield Glen Centurion, 0157
	Tel	: 086 177 7719
	Fax	: TBC

	e-mail	: TBC	
10.1	The <i>Supervisor</i> is: (Name)	: TBC	
	Address	: TBC	
	Tel No.	: TBC	
	Fax No.	: TBC	
	e-mail	: TBC	
11.2(13)	To Provide the works is to complete the <i>works</i> in accordance with the contract.	The Construction of Mechanical HVAC installation and associated Electrical Services for the refurbishment of the ACSA Airside Office Building for Period of 12 Months	
11.2(14)	The following matters will be included in the Risk Register	• Availability of existing as built survey and services. • Access to Site (approvals and permits, police clearance required) • Tie-in with existing infrastructure • Delay in supply of material and/or equipment • Progress of the works against the program	
11.2(15)	The <i>boundaries of the site</i> are	Cape Town International Airport - Airside Office Side Office Building perimeter	
11.2(16)	The Site Information is in	Part C4: Site Information	
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.	
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 for reply</i> is	2 weeks	
2	The <i>Contractor's</i> main responsibilities	Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	12 Months from contract <i>start date</i>	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<i>Condition to be met</i>	<i>key date</i>
		1 Start Date	3 weeks after contract start date
		2 Submission of Programme	2 weeks after contract start date

		3	Programme Updates	At intervals no longer than 4 weeks
30.1	The <i>access dates</i> are:	Part of the Site		Date
		1	SOB Airside	Contract start date
		2	SOB Substation	Contract start date
		3	Terminal 5 Substation	Contract start date
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	Two (2) weeks of the Contract Date. - The Employer has issued a Bulk Purchase agreement (BPA) - The Construction Works Permit has been issued to the Contractor by the Department of Labour. - Once <i>Employer</i> training requirements, e.g. (AVOP, Security Awareness Training, Airside Induction Training, PARTAC, etc) have be completed by the <i>Contractor's</i> staff. - Safety File has been approved by the Client		
31.2	The <i>starting date</i> is	Upon signing of contract by ACSA		
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	Four (4) weeks		
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.			
4	Testing and Defects			
42.2	The <i>defects date</i> is	52 weeks after Completion of whole of the <i>works</i> .		
43.2	The <i>defect correction period</i> is	Two (2) weeks		
	except that the <i>defect was notified before completion the period</i> is	Water related leaks is One (1) week		
	and the <i>defect correction period</i> for	Electrical related fault is One (1) week		
5	Payment			
50.1	The <i>assessment interval</i> is	Every four (4) weeks, on the 15th day of each successive month.		
51.1	The <i>currency of this contract</i> is the	South African Rand.		
51.2	The period within which payments are made is	Four (4) weeks.		
51.4	The <i>interest rate</i> is	(i) percent publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by Nedbank Bank; and (ii) the exchange rate published by the South African Reserve Bank from time to time for amounts due in other currencies.		

6 Compensation events

60.1(13) The place where weather is to be recorded is:

Cape Town International Airport

The *weather measurements* to be recorded for each calendar month are,

- 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
- the number of days with snow lying at 09:00 hours South African Time and these measurements:

The *weather measurements* are supplied by

AccuWeather

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

Cape Town International Airport

and which are available from:

the South African Weather Bureau and included in Annexure A to this Contract Data provided by the Employer

7 Title

There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.

8 Risks and insurance

80.1 These are additional *Employer's* risks

Refer to ACSA insurance clauses in Annexure D.

81.1 The Contractor's Risk

Add:

Definition of Force Majeure -

The following additional conditions must satisfied:

(1) The Contractor has engaged with the persons responsible for the riot, commotion, disorder, strike or lockout; has met with the persons or leaders; and has recorded the persons or leaders details, their grievances, the organisations involved, all threats made; and has requested the persons or leaders to cease all unlawful conduct; and

(2) The Contractor has obtained proof of the riot, commotion, disorder, strike or lockout, and of any unlawful conduct; and

(3) The Contractor has reported all threats and unlawful conduct to the South African Police Service; and

(4) The Contractor has brought an urgent application to the court on an ex parte basis that correctly identify the

		<i>respondents and define the unlawful conduct to be interdicted; and</i> 1. (5) <i>The Contractor has ensured that the court order is enforced.</i>
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	Refer Annexure D to this Contract Data provided by the Employer.
84.1	The <i>Employer</i> provides these additional insurances	Refer to Insurance Schedule in Annexure D provided by the Employer.
84.1	The <i>Contractor</i> provides these additional insurances	Refer to Insurance Schedule in Annexure D to this Contract Data provided by the Employer.
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is	Refer to Insurance Schedule in Annexure D to this Contract Data provided by the Employer.
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
B	Priced contract with bill of quantities	
60.6	The <i>method of measurement</i> is	Standard Unit of Measurement published by ASAQs and amended as stated in Part C2.1, Pricing Assumptions.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is (Name)	Both parties will agree the Adjudicator when a dispute arises. If the parties cannot reach an agreement on the Adjudicator within 30 days of a dispute arising, the Adjudicator shall be appointed by the nominating body.
W1.2(3)	The <i>Adjudicator nominating body</i> is:	The Chairman of the Johannesburg Society of Advocates, or his successor or his nominee.
W1.4(2)	The <i>tribunal</i> is:	Arbitration
W1.4(5)	The <i>arbitration procedure</i> is	The arbitration procedure is set out in the rules for the conduct of arbitration, 7th edition rule of the Association of Arbitrators (Southern Africa)
	The place where arbitration is to be held is	Cape Town, South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee of the Johannesburg Advocates' Bar council.
	- if the arbitration procedure does not state who selects an arbitrator, is	

12	Data for secondary Option clauses	
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
X7	Delay damages	
X7.1	Delay damages for late Completion of the sections of the works are:	2.5% to the maximum of 10% of the price at completion date
X16	Retention (not used with Option F)	
	The retention percentage is	5% of the contract value , 2,5% will be released at Completion of the works and the remaining 2,5% will be released after the Twelve (12) months of defects liability period
X17	Low performance damages	
X17.1	The amounts for low performance damages are:	Amount
		Performance level
		R 1500,00/day
		For delays in commission the system as per project plan
		R 1500,00/day
		Failing to maintain the design temperature performance
		R 1500,00/day
		Failure to respond and correct defects within defect correction period of Two (2) weeks
X18	Limitation of liability	
X18.1	The Contractor's liability to the Employer for indirect or consequential loss is limited to:	Refer to insurance clauses in Annexure D, ACSA Insurance Clauses.
X18.2	For any one event, the Contractor's liability to the Employer for loss of or damage to the Employer's property is limited to:	Refer to insurance clauses in Annexure D, ACSA Insurance Clauses.
X18.3	The Contractor's liability for Defects due to his design which are not listed on the Defects Certificate is limited to	Refer to insurance clauses in Annexure D, ACSA Insurance Clauses.
X18.4	The Contractor's total liability to the Employer for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	The total of the Prices other than for the additional excluded matters.
		The Contractor's total liability for the additional excluded matters is not limited.
		The additional excluded matters are amounts for which the Contractor is liable under this contract for
		- Defects due to his design which arise before the Defects Certificate is issued, - Defects due to manufacture and fabrication outside the Site,

		• 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.
X18.5	The <i>end of liability date</i> is	As per the <i>Prescription Act</i> .
Z	The <i>Additional conditions of contract</i> are	Z1 to Z 16

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 *Project Manager*, the *Supervisor*, or the *Adjudicator* 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: Delete core clause 20.1 and replace with the following:

Z2.1 The *Contractor* 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: add the following at the end of core clause 27:

Z3.1 The *Contractor* 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 *Contractor* shall be responsible for the correct setting out of the *Works* in accordance with the original points, lines and levels stated in the *Works* Information or notified by the *Project Manager*, *Supervisor* or the *Employer*. Any errors in the positioning of the *Works* shall be rectified by the *Contractor* at the *Contractor's* own costs.

Z4. Extending the defects date: add the following as a new core clause 46:

Z4.1 If the *Employer* cannot use the *works* due to a Defect, which arises after Completion and before the *defects date*, the *defects date* is delayed by a period equal to that during which the *Employer*, due to a Defect, is unable to use the *works*.

Z4.2 If part of the *works* is replaced due to a Defect arising after Completion and before the *defects date*, the *defects date* for the part of the *works* 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 *Project Manager* notifies the *Contractor* of the change to a *defect date* when the delay occurs. The period between Completion and an extended *defects date* does not exceed twice the period between Completion and the *defects date* 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

recue proceedings”.

AMENDMENTS TO THE SECONDARY OPTION CLAUSES

Z6. Changes in Law: Add the following clause to secondary option X2 as X2.2:

Z6.1 A change in law is defined as:

Z6.1.1 the adoption, enactment, promulgation, coming into effect, repeal, amendment, reinterpretation, change in application or other modification after the Contract Date of any law, excluding (i) the enactment of any bill inside the country, but only if such bill is enacted without any material changes being made to the contents of such bill from the form published in the Gazette (as defined in the Interpretation Act, 1957) as at the Contract Date, and (ii) any such modification in law relating to any taxes, charges, imposts, duties, levies or deductions that are assessed in relation to a person's income

Z6.1.2 any permit being terminated, withdrawn, amended, modified or replaced, other than (i) in accordance with the terms upon which it was originally granted, (ii) as a result of the failure by the *Contractor* to comply with any condition set out therein, or (iii) as a result of any act or omission of the *Contractor*, any Subcontractor or any affiliate to the *Contractor*.

Z7. Performance Bond

Z7.1. Amend the first sentence of clause X13.1 to read as follows: The *Contractor* gives the *Employer* an unconditional, on-demand performance bond, provided by a bank or insurer which the *Project Manager* and the *Employer* have accepted, for the amount stated in the Contract Data and in the form set out in Annexure C.ii of this Contract Data.

Z7.2. 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 specify 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.

Z8. Limitation of liability: Insert the following new clause as Option X18.6:

Z8.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to an amount to be addressed with client.

Z8.2 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

Z9. Cession, delegation, and assignment

Z9.1. 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*.

Z9.2. The *Employer* may, on written notice to the *Contractor*, cede and delegate its rights and obligations under this contract to any person or entity.

Z10. Joint and several liability

- Z10.1.** 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.
- Z10.2.** 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.
- Z10.3.** 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*.

Z11. Ethics

- Z11.1.** The *Contractor* undertakes:
- Z11.1.1.** 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;
- Z11.1.2.** 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.
- Z11.2.** 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.
- Z11.3.** 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.

Z12. Confidentiality

- Z12.1.** 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.
- Z12.2.** 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*.
- Z12.3.** This undertaking shall not apply to –
- Z12.3.1.** 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;
- Z12.3.2.** 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;
- Z12.3.3.** 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);

Z12.4. 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*.

Z12.5. The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

Z13. *Employer's Step-in rights*

Z13.1. 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*.

Z13.2. 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.

Z14. *Liens and Encumbrances*

Z14.1. The *Contractor* keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The *Contractor*, vis-a-vis the *Employer*, 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 *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

Z15. *Intellectual Property*

Z15.1 Intellectual Property ("IP") rights means all rights in and to any patent, design, copyright, trademark, trade name, trade secret or other intellectual or industrial property right relating to the Works.

Z15.2 IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works*.

Z15.3 The *Contractor* gives the *Employer* an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the *works* for the purposes of constructing, repairing, demolishing operating and maintaining the works.

Z15.4 The written approval of the *Contractor* is to be obtained before the *Contractor's* IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any *Contractor's* IP available to any third party the *Employer* shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the *Employer* would use to protect its IP.

Z15.5 The *Contractor* shall indemnify and hold the *Employer* harmless against and from any claim alleging an infringement of IP rights ("**the claim**"), which arises out of or in relation to:

Z15.5.1 the *Contractor's* design, manufacture, construction, or execution of the Works;

Z15.5.2 the use of the *Contractor's* Equipment, or

Z15.5.3 the proper use of the Works.

Z15.6 The *Employer* shall, at the request and cost of the *Contractor*, assist in contesting the claim and the *Contractor* may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.

Z16. **Dispute resolution: The following amendments are made to Option W1:**

Z16.1 **Under clause W1.3, in the fourth row of the first column of the adjudication table, the following words are added after the words “any other matter”:** “excluding disputes relating to termination of the contract”.

Z16.2 **The following clauses are added at the end of clause W1.3:**

Z16.2.1 “The Adjudicator shall decide the dispute solely on the written submissions of the parties. No oral submissions shall be heard during adjudication.”

Z16.2.2 “Disputes relating to or arising from termination of the Contract shall not be determined by an adjudicator. Any such dispute shall be referred directly to arbitration.”

Annexure A: One-in-ten-year-return *weather data* obtained from SA Weather Bureau for [weather station]

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	<i>Weather measurement</i>				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	[•]	[•]	[•]	[•]	
February	[•]	[•]	[•]	[•]	
March	[•]	[•]	[•]	[•]	
April	[•]	[•]	[•]	[•]	
May	[•]	[•]	[•]	[•]	
June	[•]	[•]	[•]	[•]	
July	[•]	[•]	[•]	[•]	
August	[•]	[•]	[•]	[•]	
September	[•]	[•]	[•]	[•]	
October	[•]	[•]	[•]	[•]	
November	[•]	[•]	[•]	[•]	
December	[•]	[•]	[•]	[•]	

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.

Annexure B: Pro forma Security Bonds and Guarantee

Reference to C1.3 Forms of Securities

Annexure C: ACSA Panel of Adjudicators

One of the following adjudicators shall be selected by the referring party as and when a dispute arises. This panel is valid for a period of three years, commencing on 1 May 2020.

Potential Adjudicator	Email Address	Chamber
Adv. Mkhululi Duncan Stubbs	duncan.stubbs@gmail.com	Thulamela Chambers
Adv. Arzhar Bham SC	bhamae@law.co.za	Victoria Mxenge
Adv. Mohhamed Chohan SC	chohann@counsel.co.za	Group One
Adv. Benny Makola	benny.makola@gmail.com	Group 621
Adv. Vincent Maleka SC	ivmaleka@mweb.co.za	Thulamela Chambers
Adv. Chris Loxton SC	loxton@counsel.co.za	Group One

Annexure D: ACSA Insurance Clauses***Summary of Terms and other Matters Applicable to Employer Provided Insurance Part 1:***

Notes to Schedule:

Notwithstanding anything elsewhere contained in the Contract and without limiting the obligations liabilities or responsibilities of the Contractor in any way whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the Employer shall effect and maintain as appropriate in the joint names of the Employer , Contractors and Sub-Contractors, Consultants and Sub-Consultants the following insurances which are subject to the terms, limits, exceptions and conditions of the Policy:

For OPEX projects and non-construction CAPEX projects on the **landside**:

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**:

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.

Please note that where the project covers **both landside and airside**, only the airside clause will apply.

1.1 Sub-Contractors.

The Contractor shall:

- a) ensure that all potential and appointed Sub-contractors are aware of the whole contents of these Insurance Clauses, and
- b) enforce the compliance by subcontract agreement between the Contractor and Sub-Contractor and where applicable that the Subcontractor effect similar insurance relating to the insurances required to be effected by the Contractor under Clause 2 (Contractor effected insurances).

APPENDIX A**CONTRACTORS CLAIMS ADVICE FORM - FOR ACSA INSURED CONTRACTS UNDER THE ANNUAL POLICY****Send to: Airports Company South Africa***
.....
.....
.....
.....
.....**E-Mail The Following People:**Nokulunga.Masiza@airports.co.zaBuhle.Mnguni@airports.co.za

* (Please provide name of contracting company, site address, telephone numbers and e-mail address).

RE: ACSA CONTRACTORS: CAR/PL/PI: CLAIM

Date of loss: _____

Reported to site agent by: _____ Date: _____

Reported to Insurance Broker by: _____ Date: _____

How did the loss occur (cause)? _____

Details and nature of loss or damage to Contract Works _____

Details of other property damaged _____

Names and address of witnesses _____

Estimated cost of repairs (Separate records of all costs must be kept) R_____

Person whom assessor should contact _____

Telephone/Mobile Numbers Of Contact Person _____

Email Address of Contact Person _____

C1.2 Contract Data

Part two - Data provided by the *Contractor*.

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)

Whenever a cell is shaded in the left hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)² in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 152 to 154 of the ECC3 Guidance Notes.
2. The number of the clause which requires the data is shown in the left-hand column for each statement however other clauses may also use the same data
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	Refer to C4 'Site Information'
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience: 3 Name:	Construction Manager/ Site Supervisor Site Foreman

² Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates. Please insert another schedule if foreign resources may also be used	Category of employee	Hourly rate	
62 in SSCC	The percentage for design overheads is	%		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			

C1.3 Forms of Securities

Pro forma for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract (April 2013)

[Note to contract compiler:

Once it has been decided which securities are required for this contract delete from this file the ones not required, revise the notes below accordingly and delete this note.]

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Options:

Option X16: Retention (not used with Option F)

The *Contractor* may provide a Retention Money Guarantee in the form stated here. When the *Employer* receives and accepts a Retention Money Guarantee exactly in the form stated he will instruct the *Project Manager* not to assess any amount be retained in terms of secondary Option X16.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

Pro forma Retention Money Guarantee (may be used when Option X16 applies)*(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)***The Airports Company South Africa SOC Limited**O.R. Tambo International Airport
The Maples, 24 Johnson Road
Bedfordview 2008

Date:

Dear Sirs

Reference No. [●] *[Drafting Note: Bank reference number to be inserted]***Retention Money Guarantee:** *[Drafting Note: Name of Contractor to be inserted]*Project [] : Contract Reference: *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-

1.1	"Bank" means	[Insert name of Bank], [●] Branch, Registration No. [●]
1.2	"Bank's Address" means	[Insert physical address of Bank]
1.3	"Contract" means	the written agreement relating to providing the <i>works</i> , entered into between the <i>Employer</i> and the <i>Contractor</i> , on or about the [●] day of [●] 20[●] (Contract Reference No. [●]) as amended, varied, restated, novated or substituted from time to time;
1.4	"Contractor" means	[●] a company registered in accordance with the laws of [●] under Registration No [●].
1.5	"Employer" means	[●] a company registered in accordance with the laws of the Republic of South Africa under Registration Number [●]
1.6	"Expiry Date" means	the date on which the Defects Certificate is issued in terms of the Contract.
1.7	"Guaranteed Sum" means	the sum of R[●], ([●] Rand)
1.8	"works" means	[insert details from Contract Data part 1]

2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer* as security for the proper performance by the *Contractor* of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

- be signed on behalf of the *Employer* by a director of the *Employer*;
- state the amount claimed ("the Demand Amount");
- state that the *Contractor* has failed to carry out his obligation(s) to rectify certain Defect(s) for which he is responsible under the Contract (and the nature of such defect(s)) alternatively that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

- is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

5. The Bank's obligations in terms of this Guarantee:

- shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.

6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.

7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.

8. This Guarantee:

- shall expire on the Expiry Date until which time it is irrevocable;
- is, save as provided for in **Error! Reference source not found.** above, personal to the *Employer* and is neither negotiable nor transferable;
- shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- shall be regarded as a liquid document for the purpose of obtaining a court order; and
- shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
- will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.

9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ on this _____ day of _____ 20__

For and on behalf of the Bank

Bank Signatories(s)

Name(s) (printed)

Witness(s)

Bank's seal or stamp

Pro forma ASGI-SA Guarantee*(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)***The Airports Company South Africa SOC Limited**O.R. Tambo International Airport
The Maples, 24 Johnson Road
Bedfordview 2008

Date:

Dear Sirs

Reference No. [●] *[Drafting Note: Bank reference number to be inserted]***Pro-Forma ASGI-SA Guarantee:** *[Drafting Note: Name of Contractor to be inserted]***Project [] Contract Reference: [●] [Drafting Note: Contractor contract reference number to be inserted]**

1. In this Guarantee the following words and expressions shall have the following meanings:-

1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); *[Drafting Note: Name of Bank to be inserted]*1.2 "Bank's Address" - means [●]; *[Drafting Note: Bank's physical address to be inserted]*1.3 "Contract" – means the written agreement relating to the Project, entered into between the *Employer* and the *Contractor*, on or about the [●] day of [●] 200[●] (Contract Reference No. [●] as amended, varied, restated, novated or substituted from time to time; *[Drafting Note: Signature Date and Contract reference number to be inserted]*)1.4 "*Contractor*" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. *[Drafting Note: Name and details of Contractor to be inserted]*1.5 "*Contractor's ASGI-SA Obligations*" – means the *Contractor's ASGI-SA Obligations* under and as defined in the Contract.1.6 "*Employer*" - means Eskom Holdings Limited, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/06.1.7 "Expiry Date" - means the [●] day of [●] 200[●]; *[Drafting Note: anticipated date of issue of ASGI-SA Performance Certificate to be inserted.]*

1.8 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);

1.9 "Project" – means the

2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer*, as security for the proper performance by the *Contractor* of the *Contractor's ASGI-SA Obligations* and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

3.1 state the amount claimed ("the Demand Amount");

3.2 state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.
6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in **Error! Reference source not found.** above, personal to the *Employer* and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

Part C2: Pricing Data

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	6
C2.2	The <i>Bill of quantities</i>	17

C2.1 Pricing assumptions: Option B

1. The conditions of contract

1.1. How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, April 2013 (ECC3) Option B states:

Identified and defined terms	11 11.2	(21) The Bill of Quantities is the <i>bill of quantities</i> as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.
		(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.
		(28) The Price for Work Done to Date is the total of - the quantity of the work which the <i>Contractor</i> 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 <i>Contractor</i> 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. The Contractor is paid based on the actual quantities of work performed as opposed to the quantities set out in the Bill of Quantities. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time. With this pricing method, the Contractor bears the risk for his pricing of the bill and the Employer bears the risk for changes in the quantities.

1.2. Function of the Bill of Quantities

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

1.3. Guidance before pricing and measuring

1.3.1 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) the requirements of the tender (if any) and the Guidance Notes before preparing the bill of quantities or before entering rates and lump sums into the bill.

1.3.2 The NEC approach to the P & G bill assumes use will be made of method related charges for Equipment applied to Providing the Works based on durations shown in the Accepted Programme, fixed charges for the use of Equipment that is required throughout the construction phase, time related charges for people working in a supervisory capacity for the period required, and lump sum charges

for other facilities or services not directly related to performing work items typically included in other parts of the bill.

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

2. Measurement and payment

2.1. Symbols

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

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
Prov sum ³	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

2.2. General assumptions

- 2.2.1 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 2.2.2 The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the Contractor in carrying out or providing that item.
- 2.2.3 An item against which no Price is entered will be treated as covered by other Prices or rates in the bill of quantities.
- 2.2.4 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.

³ Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary.

- 2.2.5 The short descriptions of the items of payment given in the bill 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.

2.3. Departures from the method of measurement

2.4. Amplification of or assumptions about measurement items

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

C2.2 the *bill of quantities*

Use this page as a cover page to the *Contractor's bill of quantities*.

C3 ECC3 COVER PAGE

9.6	Discard Existing ducting (Re-use if in good condition)	m ²	250		
9.7	Supply fire sealants to 2 hour fire rated for openings where pipework and ducting	Sum	1		
HVAC Preliminaries and general items for the ACSA SOB Offices (Total Excluding 15% VAT)					

BILL NO.2:	GROUND FLOOR HVAC INSTALLATION				
	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1,0	Supply, install and commission the following heating, ventilation and air-conditioning equipments:				
	Exhaust Air Systems				
1.1	<u>Inline duct mounted fan installed complete with matching sound attenuators on either side of the fan. Fan shall be supplied complete with speed controller and timer.</u>				
	Diameter 400mm Fan delivering (300-500 l/s) against 150 pa.	No	3		
	Diameter 315mm Fan delivering (100 - 200 l/s) against 150 pa.	No	1		
1.2	<u>Un-insulated Galvanized Sheet Metal air ducting complete with support brackets.</u>				
	- <u>1200 x 600 mm</u>				
	Duct	m	1		
	Bend	No	0		
	Transformation (1200 x 600 / dia. 400 mm)	No	6		
	- <u>500 x 250 mm</u>				
	Duct	m	12		
	Transformation (500 x 250 / 400 x 250 mm)	No	4		
	- <u>400 x 250 mm</u>				
	Duct	m	12		
	Transformation (400 x 250 / 325 x 250 mm)	No	6		
	Bend	No	10		
	<u>350 x 250 mm</u>				

	Duct	m	6		
	Transformation (350 x 250 / 150 x 250 mm)	No	2		
	<u>300 x 250 mm</u>				
	Duct	m	15		
	Transformation (350 x 350 / 150 x 250 mm)	No	8		
	Bend	No	5		
	<u>250 x 250 mm</u>				
	Duct	m	18		
	Transformation (250 x 250 / 150 x 250 mm)	No	6		
	Bend	No	5		
	<u>200 x 250 mm</u>				
	Duct	m	20		
	Stop -end	No	7		
	Bend	No	18		
	<u>150 x 250 mm</u>				
	Duct	m	20		
	Stop -end	No	7		
	Bend	No	14		
	<u>150mm Diameter Ducting</u>				
	Spigot	No	25		
	Steel Duct	m	88		
	Flexible Duct	m	75		
	<u>200mm Diameter Ducting</u>				
	Spigot	No	10		
	Steel Duct	m	20		
	Flexible Duct	m	12		
	<u>250mm Diameter Ducting</u>				
	Spigot	No	0		
	Steel Duct	m	0		
	Flexible Duct	m	0		
1.3	- <u>650x250: Plenum</u>				
	Duct	m	5		
1.4	<u>Exhaust Disc Valve with adjustable central disc for air flow rate variation.</u>				
	DS150: Dia 150mm	No.	30		
1.5	- <u>Wall Mounted Extraction Fan complete with natural anodised aluminium weather louvre with vermin-proof wiremesh.</u>				
	WF-01: Dia 230mm Delivering 100l/s complete with timer and motion sensor for switching on and off.	no.	6		

2,0	Fresh air Systems				
	<u>Inline duct mounted fan installed complete with matching sound attenuators on either side of the fan. Fan shall be supplied complete with speed controller and timer.</u>				
2.1	Diameter 400 Fan delivering 500 l/s against 150 pa.	No	3		
	Diameter 560 Fan delivering 1200 l/s against 150 pa.	No	1		
2.2	<u>Uninsulated Galvanized sheet metal supply air ducting complete with support brackets.</u>				
	-				
	<u>850 x 250 mm</u>				
	Duct	m	10		
	Transformation (500 x 250 / 400 x 250 mm)	No	2		
	<u>700 x 250 mm</u>				
	Duct	m	12		
	Transformation (500 x 250 / 400 x 250 mm)	No	4		
	<u>400x250 mm</u>				
	Duct	m	15		
	Square to Round (400x250 / Dia 200 mm)	No	5		
	Square to Round (400x300 / Dia 315 mm)	No	5		
	Bend	No	5		
	Stop-end	No	4		
	<u>400x250 mm</u>				
	Duct	m	0		
	Shoe	No	0		
	Transformation (400 x 250 / 150 x 250 mm)	No	0		
	<u>200x250 mm</u>				
	Duct	m	15		
	Square to Round (200x250 / Dia 200 mm)	No	25		
	Bend	No	15		
	Transformation (Dia 250mm / Dia 200 mm)	No	6		
	<u>250x250 mm</u>				
	Duct	m	12		
	Square to Round (250x250 / Dia 200 mm)	No	4		
	Shoe	No	4		
	Stop-end	No	2		
	.				
	<u>150x250 mm</u>				
	Duct	m	20		
	Shoe	No	4		
	Stop-end	No	4		
	Bend	No	12		

2.3	<u>150mm Diameter Ducting</u>				
	Duct	m	10		
	Spigot	No	5		
	Flexible Duct	No	30		
	Bend	No	5		
2.4	<u>200mm Diameter Ducting</u>				
	Duct	m	55		
	Spigot	No	45		
	Flexible Duct	No	68		
	Bend	No	18		
2.5	<u>250mm Diameter Ducting</u>				
	Duct	m	25		
	Spigot	No	15		
	Flexible Duct	No	23		
	Bend	No	10		
2.6	<u>Natural anodized Aluminium Door Grille with fixed inverted Vee blades</u>				
	DG01: 600x300	no.	70		
2.7	<u>Weatherproof: Natural anodised weather Louvre with vermin proof wiremesh backing.</u>				
	900 x 300 mm	No.	1		
	400 x 300 mm	No.	1		
	650 x 300 mm	No.	3		
2.8	<u>Non Return damper.</u>				
	Dia 200mm	No.	0		
2.9	<u>Opposes blade damper.</u>				
	Dia 250mm	No.	55		
	Dia 200mm	No.	65		
	Dia 150mm	No.	45		
3,0	VRV Outdoor units (Central Plant)				
3.1	NORTH _ ODU-01 - 124 kW VRV Heat Recovery Condenser Unit	No	1		
3.2	SOUTH_ODU-02 - 156 kW VRV Heat Recovery Condenser Unit	No	1		
4,0	VRV Indoor units -Cassette Type (4 way blow Type)				
4.1	2.8kW VRV HR Round Flow Cassette	No	0		
4.2	3.6kW VRV HR Round Flow Cassette	No	0		

4.3	4.5kW VRV HR Round Flow Cassette	No	2		
4.4	7.1kW VRV HR Round Flow Cassette	No	1		
4.5	11.2kW VRV HR Round Flow Cassette	No	0		
4.6	14kW VRV HR Round Flow Cassette	No	0		
5,0	Variable Ref Vol Hideaway Units				
5.1	2.2 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
5.2	2.8 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
5.3	3,6 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
5.4	4,5 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	1		
5.5	7,1 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	3		
5.6	11,2 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	5		
5.7	18 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
5.8	22 kW, VRV Heat Pump Hideaway Unit complete with remote and condensate pump.	No.	4		
5.9	25 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
5.10	<u>Insulated Galvanized Sheet Metal supply air ducting complete with support brackets.</u>				
	-				
	<u>850 x 350 mm</u>				
	Duct	m	15		
	Transformation (850 x 350 / 500 x 500 mm)	No	6		
	Transformation (850 x 350 / 600 x 350 mm)	No	4		
	<u>1050 x 350 mm</u>				
	Duct	m	6		
	Bend	No	23		
	Transformation (1050 x 350 / 500 x 500 mm)	No	6		
	<u>400 x 250 mm</u>				
	Duct	m	45		
	Transformation (400 x 250 / 350 x 250 mm)	No	4		
	Trouser piece	No	5		
	<u>350 x 250 mm</u>				
	Duct	m	12		

	Transformation (350 x 250 / 300 x 250 mm)	No	2		
	<u>300 x 250 mm</u>				
	Duct	m	15		
	Transformation (300 x 350 / 250 x 250 mm)	No	8		
	<u>250 x 250 mm</u>				
	Duct	m	18		
	Transformation (250 x 250 / 200 x 250 mm)	No	6		
	<u>200 x 250 mm</u>				
	Duct	m	18		
	Transformation (200 x 250 / 150 x 250 mm)	No	12		
	Shoe Piece	No	20		
	Transformation (200 x 250 / Dia 200 mm)	No	8		
	<u>150 x 250 mm</u>				
	Duct	m	6		
	Stop -end	No	7		
	<u>250 x 250 mm</u>				
	Duct	m	18		
	Transformation (250 x 250 / 150 x 250 mm)	No	6		
	<u>150mm Diameter Ducting</u>				
	Spigot	No	25		
	Steel Duct	m	15		
	Flexible Duct	m	23		
	<u>200mm Diameter Ducting</u>				
	Spigot	No	30		
	Steel Duct	m	25		
	Flexible Duct	m	20		
	<u>250mm Diameter Ducting</u>				
	Spigot	No	25		
	Steel Duct	m	20		
	Flexible Duct	m	15		
	<u>300mm Diameter Ducting</u>				
	Spigot	No	15		
	Steel Duct	m	10		
	Flexible Duct	m	15		
	<u>1200x600: Plenum 250mm Deep</u>				
	Duct	m	30		
6	<u>Hinged type Return Air Grille with fixed blades installed. Shall be epoxy powder coated white.</u>				

	1200 x 600 mm	No.	30		
7	<u>Swirl Outlet Supply Air Diffusers. Shall be epoxy powder coated white.</u>				
	DS150: Dia 150mm	No.	15		
	DS250: Dia 200mm	No.	20		
	DS250: Dia 250mm	No.	35		
	DS300: Dia 300mm	No.	0		
8	Controls				
	Wall mounted wired remote controls	No	15		
9	Heat exchange box				
	2 - Port Heat recovery box unit	No	0		
	4 - Port Heat recovery box unit	No	0		
	6 - Port Heat recovery box unit	No	2		
	10 - Port Heat recovery box unit	No	1		
10	Refrigerant piping - complete with supports				
	Class type as per manufacture's recommendation				
	ø6.35mm	m	125		
	ø9.52mm	m	125		
	ø12.7mm	m	188		
	ø15.86mm	m	100		
	ø28.6mm	m	88		
11	Refrigerant pipe insulation - (Armaflex)				
	ø6.35mm	m	156		

	ø9.52mm	m	156		
	ø12.7mm	m	234		
	ø15.86mm	m	125		
	ø28.6mm	m	109		
12	Refrigerant				
	R410A Refrigerant	kg	60		
13	Condensate PVC piping				
	ø32mm	m	150		
	ø50mm	m	200		
14	Branch connection kit				
	Branch refnet joint connection kit	No	20		
HVAC Installation for the ACSA Offices (Total Excluding 15% VAT)					

BILL NO.3:	FIRST FLOOR HVAC INSTALLATION				
	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Supply, install and commission the following heating, ventilation and air-conditioning equipments:				
1	Exhaust Air Systems				
	<u>Inline duct mounted fan installed complete with matching sound attenuators on either side of the fan. Fan shall be supplied complete with speed controller and timer.</u>				
	Diameter 400mm Fan delivering (300-500 l/s) against 150 pa.	No	0		
	Diameter 315mm Fan delivering (100 - 200 l/s) against 150 pa.	No	3		
	<u>Un-insulated Galvanized Sheet Metal air ducting complete with support brackets.</u>				
	<u>1200 x 600 mm</u>				
	Duct	m	1		
	Bend	No	0		
	Transformation (1200 x 600 / dia. 400 mm)	No	3		
	<u>Externally Insulated Galvanized Sheet Metal supply air ducting complete with support brackets.</u>				
	<u>600 x 250 mm</u>				
	Duct	m	3		
	Transformation (600 x 250 / 350 x 250 mm)	No	3		
	<u>350 x 250 mm</u>				
	Duct	m	12		
	Transformation (400 x 250 / 325 x 250 mm)	No	6		
	Bend	No	8		
	<u>300 x 250 mm</u>				
	Duct	m	4		
	Transformation (350 x 350 / 150 x 250 mm)	No	2		
	Bend	No	2		
	<u>250 x 250 mm</u>				
	Duct	m	5		

	Transformation (250 x 250 / 150 x 250 mm)	No	2		
	Bend	No	2		
-	<u>200 x 250 mm</u>				
	Duct	m	0		
	Stop -end	No	0		
	Bend	No	0		
-	<u>150 x 250 mm</u>				
	Duct	m	10		
	Stop -end	No	6		
	Bend	No	4		
-	<u>150mm Diameter Ducting</u>				
	Spigot	No	18		
	Steel Duct	m	45		
	Flexible Duct	m	27		
-	<u>200mm Diameter Ducting</u>				
	Spigot	No	0		
	Steel Duct	m	0		
	Flexible Duct	m	0		
-	<u>250mm Diameter Ducting</u>				
	Spigot	No	0		
	Steel Duct	m	0		
	Flexible Duct	m	0		
-	<u>650x250: Plenum</u>				
	Duct	m	0		
-	<u>Exhaust Disc Valve with adjustable central disc for air flow rate variation.</u>				
	DS150: Dia 150mm	No.	18		
-	<u>Wall Mounted Extraction Fan complete with natural anodised aluminium weather louvre with vermin-proof wiremesh.</u>				
	WF-01: Dia 230mm Delivering 100l/s complete with timer and motion sensor for switching on and off.	no.	0		
2	Fresh air Systems				
-	<u>Inline duct mounted fan installed complete with matching sound attenuators on either side of the fan. Fan shall be supplied complete with speed controller and timer.</u>				
	Diameter 400 Fan delivering 500 l/s against 150 pa.	No	3		
2.1	<u>Uninsulated Galvanized sheet metal supply air ducting complete with support brackets.</u>				

3	-			
	<u>400x250 mm</u>			
	Duct	m	8	
	Square to Round (400x250 / Dia 200 mm)	No	2	
	Square to Round (400x300 / Dia 315 mm)	No	2	
	Bend	No	4	
	Stop-end	No	3	
	<u>350x250 mm</u>			
	Duct	m	12	
	Shoe	No	2	
	Transformation (400 x 250 / 350 x 250 mm)	No	2	
	Transformation (350 x 250 / 200 x 250 mm)	No	2	
	<u>200x250 mm</u>			
	Duct	m	20	
	Square to Round (200x250 / Dia 200 mm)	No	25	
	Bend	No	15	
	Transformation (Dia 250mm / Dia 200 mm)	No	6	
	<u>150x250 mm</u>			
	Duct	m	5	
	Shoe	No	4	
	Stop-end	No	4	
	Bend	No	12	
	<u>150mm Diameter Ducting</u>			
	Duct	m	10	
	Spigot	No	5	
	Flexible Duct	No	30	
	Bend	No	5	
	<u>200mm Diameter Ducting</u>			
	Duct	m	48	
	Spigot	No	6	
	Flexible Duct	No	9	
	Bend	No	4	
	<u>250mm Diameter Ducting</u>			
	Duct	m	5	
	Spigot	No	5	
	Flexible Duct	No	3	
	Bend	No	4	
	<u>Weatherproof: Natural anodised weather Louvre with vermin proof wiremesh backing.</u>			
	900 x 300 mm	No.	3	
	400 x 300 mm	No.	0	
	650 x 300 mm	No.	0	

4	<u>Opposes blade damper.</u>				
	Dia 250mm	No.	2		
	Dia 200mm	No.	6		
	Dia 150mm	No.	4		
5	VRV Outdoor units (Central Plant)				
5,1	ODU-01 - 124 kW VRV Heat Recovery Condenser Unit	No	1		
5,2	ODU-01 - 124 kW VRV Heat Recovery Condenser Unit	No	2		
6	VRV Indoor units -Cassette Type (4 way blow Type)				
6.1	2.8kW VRV HR Round Flow Cassette	No	0		
6.2	3.6kW VRV HR Round Flow Cassette	No	0		
6.3	4.5kW VRV HR Round Flow Cassette	No	0		
6.4	7.1kW VRV HR Round Flow Cassette	No	0		
6.5	11.2kW VRV HR Round Flow Cassette	No	0		
6.6	14kW VRV HR Round Flow Cassette	No	0		
7	Variable Ref Vol Hideaway Units				
7.1	2.2 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
7.2	2.8 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
7.3	3,6 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
7.4	4,5 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		
7.5	7,1 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	1		
7.6	11,2 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	4		
7.7	18 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	3		
7.8	22 kW, VRV Heat Pump Hideaway Unit complete with remote and condensate pump.	No.	3		
7.9	25 kW, VRV Heat Pump Hideaway Fan Coil Unit complete with remote and condensate pump.	No.	0		

8	<u>Externally Insulated Galvanized Sheet Metal supply air ducting complete with support brackets.</u>				
	-				
	<u>550 x 250 mm</u>				
	Duct	m	5		
	Transformation (550 x 250 / 350 x 250 mm)	No	2		
	Trouser piece	No	0		
	-				
	<u>400 x 250 mm</u>				
	Duct	m	15		
	Transformation (400 x 250 / 350 x 250 mm)	No	4		
	Trouser piece	No	5		
	<u>350 x 250 mm</u>				
	Duct	m	12		
	Transformation (350 x 250 / 300 x 250 mm)	No	2		
	<u>300 x 250 mm</u>				
	Duct	m	20		
	Transformation (300 x 350 / 250 x 250 mm)	No	8		
	<u>250 x 250 mm</u>				
	Duct	m	15		
	Transformation (250 x 250 / 200 x 250 mm)	No	6		
	<u>200 x 250 mm</u>				
	Duct	m	18		
	Transformation (200 x 250 / 150 x 250 mm)	No	12		
	Shoe Piece	No	20		
	Transformation (200 x 250 / Dia 200 mm)	No	8		
	<u>150 x 250 mm</u>				
	Duct	m	25		
	Stop -end	No	5		
	<u>250 x 250 mm</u>				
	Duct	m	20		
	Transformation (250 x 250 / 150 x 250 mm)	No	5		
	<u>150mm Diameter Ducting</u>				
	Spigot	No	2		
	Steel Duct	m	10		
	Flexible Duct	m	15		
	<u>200mm Diameter Ducting</u>				
	Spigot	No	30		
	Steel Duct	m	45		
	Flexible Duct	m	30		

	<u>250mm Diameter Ducting</u>				
	Spigot	No	25		
	Steel Duct	m	20		
	Flexible Duct	m	15		
	<u>300mm Diameter Ducting</u>				
	Spigot	No	0		
	Steel Duct	m	0		
	Flexible Duct	m	0		
	<u>1200x600: Plenum 250mm Deep</u>				
	Duct	m	11		
9	<u>Hinged type Return Air Grille with fixed blades installed. Shall be epoxy powder coated white.</u>				
	1200 x 600 mm	No.	11		
10	<u>Swirl Outlet Supply Air Diffusers. Shall be epoxy powder coated white.</u>				
	DS150: Dia 150mm	No.	15		
	DS250: Dia 200mm	No.	20		
	DS250: Dia 250mm	No.	35		
11	<u>Supply air Grille. Shall be epoxy powder coated white.</u>				
	300mm x 300mm	No.	30		
12	Controls				
	Wall mounted wired remote controls	No	11		
13	Heat exchange box				
	2 - Port Heat recovery box unit	No	0		
	4 - Port Heat recovery box unit	No	1		
	6 - Port Heat recovery box unit	No	2		
	10 - Port Heat recovery box unit	No	1		
14	Refrigerant piping - complete with supports				
	Class type as per manufacture's recommendation				

	ø6.35mm	m	200		
	ø9.52mm	m	200		
	ø12.7mm	m	170		
	ø15.86mm	m	150		
	ø28.6mm	m	175		
15	Refrigerant pipe insulation - (Armaflex)				
	ø6.35mm	m	250		
	ø9.52mm	m	250		
	ø12.7mm	m	212,5		
	ø15.86mm	m	187,5		
	ø28.6mm	m	218,8		
16	Refrigerant				
	R410A Refrigerant	kg	60		
17	Condensate PVC piping				
	ø32mm	m	150		
	ø50mm	m	200		
18	Branch connection kit				
	Branch refnet joint connection kit	No	11		
HVAC Installation for the ACSA Offices (Total Excluding 15% VAT)					

--	--

Description	Total
Bill No 1 : Preliminaries and General	
Bill No 2: Ground Floor HVAC Installation	
Bill No 3: First Floor HVAC Installation	
Total VAT Exclusive	
VAT @15%	
Total (VAT Inclusive)	
This value should be reflected in the C1.1 of the contract Form of Offer and Acceptance	

Please complete this BOQ in full and in totality

Please note that if this Pricing Schedule/BOQ is not completed – The bid may be rejected and deemed non-responsive due to the lack of information for line-item pricing

ACSA reserves the right to do comparative costing exercises to compare Offers from Bidders. If any line-item pricing is absent, a fair, transparent and open comparison could lead to cost obscurity and unfair price competition

C3.1: EMPLOYER'S WORKS INFORMATION

Contents

Part 3: Scope of Work	23
C3.1: Employer's works Information	24
1 Description of the <i>works</i>	26
1.1 Executive overview	26
1.2 <i>Employer's</i> objectives and purpose of the <i>works</i>	26
1.3 Interpretation and terminology	27
2 Management and start up	28
2.1 Management meetings	28
2.2 Documentation control	28
2.3 Health and safety risk management	28
2.4 Environmental constraints and management	29
2.5 Quality assurance requirements	29
2.6 Programming constraints	29
2.7 <i>Contractor's</i> management, supervision and key people	30
2.8 Invoicing and payment	30
2.9 Insurance provided by the Employer	31
2.10 Contract change management	31
2.11 Provision of bonds and guarantees	31
2.12 Training workshops and technology transfer	31
3 Engineering and the <i>Contractor's</i> design	31
3.1 Employer's design	31
3.2 Parts of the <i>works</i> which the <i>Contractor</i> is to design	31
3.3 Procedure for submission and acceptance of <i>Contractor's</i> design	32
3.4 Other requirements of the <i>Contractor's</i> design	32
3.5 Use of <i>Contractor's</i> design	32
3.6 Design of Equipment	32
3.7 Equipment required to be included in the <i>works</i>	32
3.8 As-built drawings, operating manuals and maintenance schedules	32
4 Procurement	32
4.1 People	32
4.1.1 Minimum requirements of people employed on the Site	32
4.1.2 BBBEE and preferencing scheme	33
4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)	34
4.2 Subcontracting	34
4.2.1 Preferred subcontractors	34
4.2.2 Subcontract documentation, and assessment of subcontract tenders	34
4.2.3 Limitations on subcontracting	34
4.2.4 Attendance on subcontractors	34
4.3 Plant and Materials	34
4.3.1 Plant & Materials provided “free issue” by the <i>Employer</i>	34
4.3.2 Contractor's procurement of Plant and Materials	34
4.4 Tests and inspections before delivery	34
4.5 Marking Plant and Materials outside the Working Areas	35
4.6 Contractor's Equipment (including temporary works)	35
5 Construction	35
5.1 Temporary works, Site services & construction constraints	35
5.1.1 Employer's Site entry and security control, permits, and Site regulations	35
5.1.2 Restrictions to access on Site, roads, walkways and barricades	35
5.1.3 People restrictions on Site; hours of work, conduct and records	35
5.1.4 Health and safety facilities on Site	35
5.1.5 Environmental controls, fauna & flora, dealing with objects of historical interest	35

5.1.6 Title to materials from demolition and excavation	36
5.1.7 Contractor's Equipment	36
5.1.8 Equipment provided by the <i>Employer</i>	36
5.1.9 Site services and facilities	36
5.1.10 Facilities provided by the <i>Contractor</i>	36
5.1.11 Existing premises, inspection of adjoining properties and checking work of Others	36
5.1.12 Setting out of the <i>works</i>	36
5.1.13 Sequences of construction or installation	36
5.1.14 Hook ups to existing works	37
5.2 Completion, testing, commissioning and correction of Defects	37
5.2.1 Work to be done by the Completion Date.....	37
5.2.2 Use of the works before Completion has been certified	37
5.2.3 Materials facilities and samples for tests and inspections	37
5.2.4 Commissioning	37
5.2.5 Start-up procedures required to put the works into operation	37
5.2.6 Take over procedures.....	37
5.2.7 Access given by the Employer for correction of Defects	37
5.2.8 Performance tests after Completion	37
5.2.9 Training and technology transfer	37
5.2.10 Operational maintenance after Completion	38
6 Plant and Materials standards and workmanship.....	38
6.1 Investigation, survey and Site clearance	38
6.2 Building works.....	38
6.3 Civil engineering and structural works.....	38
6.4 Electrical & mechanical engineering works	38
6.5 Process control and IT works	38
7 List of drawings	39
7.1 Drawings issued by the <i>Employer</i>	39
Part 4: Site Information	40
Part 5: Annexures	41

1.Description of the works

1.1. Executive overview

The works comprise of the refurbishment of the Heating, Ventilation, and Air Conditioning (HVAC) and associated electrical works of the ACSA Cape Town Airside Side Office Building. The scope of work includes both Mechanical and Electrical services.

1.2. Employer's objectives and purpose of the works

The objective of this contract/project is to source a HVAC contractor/service provider to replace the Fan Coil Units with a new VRF (Variable Refrigerant Flow) system, dedicated for the airside building. The existing Heating, Ventilation, and Air Conditioning (HVAC) system is a water-cooled chilled water plant with fan coil units, and heating by electric elements installed in the office spaces.

The existing Heating, Ventilation, and Air Conditioning (HVAC) system has been in operation for more than 15 years and has signs of aging and inefficiencies. Over time, the system's performance has deteriorated, leading to increased energy consumption, higher maintenance costs, and reduced indoor air quality. The current system no longer meets SANS 10400 Part O minimum standards, ACSA D060MAN energy efficiency targets and the heating system is by electric elements which does not conform to requirements as per SANS 204 requirements.

The scope of work includes both Mechanical and Electrical services:

The scope of works will be guided by the Contractor's schedule of works, to plan the sequencing of work as follows:

- a) Phase 01: The decanting and decommissioning of Existing system
 - Provide electrical power points to "park homes".
 - Observation to health and safety, whilst decommissioning HVAC units and electrical units
- b) Phase 02: HVAC Installation - Control movement of the contractors to operate in areas permitted
 - The decommissioning will be phased out and will be followed by the installation of the new VRF system, in areas indicated in the HVAC drawings.
 - Electrical services will be provided to the HVAC units from an existing electrical source.

The drawings will form part of the documentation shared with the contractors as follows,

Drawing No.	Description
JD-2302-M-MA-101	HVAC - Ground Floor Layout
JD-2302-M-MA-102	HVAC – First Floor Layout
JD-2302-M-MA-101-A	HVAC – Ground Floor Ventilation Layout
JD-2302-M-MA-102-A	HVAC – First Floor Ventilation Layout

The contractor responsible for the installation

- a) Review of As-built drawings, Condition Assessment Reports
- b) Preparation of Workshop drawings
- c) Submission of equipment brand proposed
- d) Commissioning of equipment
- e) Practical Completion
- f) Snag list

g) Works Completion

1.3. Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
ASGI - SA	Accelerated Shared Growth Initiative – South Africa (ASGI-SA)
OBL	Outside battery limits
Abbreviation	Meaning given to the abbreviation
ACSA	Airports Company South Africa
CTIA	Cape Town International Airport
CPG	Contract Participation Goals
OEM	Original Equipment Manufacturer
PPE	Personal Protective Equipment
CCTV	Closed Circuit Television
RCA	Root Cause Analysis
OHSACT	Occupational Health and Safety Act No. 85 of 1993
SANS	South African National Standard
SABS	South African Bureau of Standards
SHE-File	Safety and Healthy File
CTB	Central Terminal Building
SOB	Southern Office Building
HVAC	Heating, Ventilation, and Air Conditioning

2. Management and start up.

2.1. Management meetings

Regular meetings of a general shall be convened and chaired by the designated person as shown in the table below.

Title and Purpose	Approximate Time & Interval	Location	Chairperson	Required Attendance
<u>Kick-off Meeting</u> - To discuss implementation strategy and agree timelines	90 minutes Once off	CTIA Offices (boardroom to be confirmed with the meeting request)	Project Manager	- SCM - The Project Manager - The Contractor - The Engineer
<u>Construction Progress</u> - To track progress as per approved programme - To discuss claims related issues. - To discuss Health & Safety performance	60 minutes Biweekly	CTIA Offices (boardroom to be confirmed with the meeting request)	The Contractor	- The Project Manager - The Contractor - The Engineer
<u>Risk Reduction</u> - To discuss means to mitigate identified risks that can have an impact on project execution.	60 minutes Biweekly	CTIA Offices (boardroom to be confirmed with the meeting request)	Project Manager	- The Project Manager - The Contractor - The Engineer
<u>Compensation Events</u> - To discuss compensation events that the Contractor has submitted	As and when required	CTIA Offices (boardroom to be confirmed with the meeting request)	Project Manager	- The Project Manager - The Contractor - The Engineer

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.

2.2. Documentation control

All contractual communications will be in the form of properly compiled letters or forms attached to e-mails and not as a message in the e mail itself.

The contractor will submit claims and progress reports after each milestone in report format agreed between the service manager and the contractor.

A list of material, parts used, by part number shall be furnished when requested by Service Manager and the contractor will be responsible to maintain an up-to-date inventory of material used/kept onsite

2.3. Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in Annexure 5.4 to this Works Information.

2.4. Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints stated in Annexure 5.5

The Contractor will keep noise and dust levels to a minimum. At no time shall his/her work result in nuisance, interference or danger to the public or any other person working at the Airport.

At no time shall the Contractor:

- Allow any pollutive or toxic substance to be released into the air or storm water systems
- Interfere with, or put at risk, the functionality of any system or service
- Cause a fire or safety hazard

2.5. Quality assurance requirements

All work must be executed in accordance with prevailing industry norms and standards relating to quality. In this regard, the Contractor will be expected to draft quality plans for the Project Manager.

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 plans 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.

2.6. Programming constraints

The Contractor is required to submit a program for approval within 2 (two) weeks of the award of this contract. This program shall be subject to discussion and review by the Project Manager and the Engineer prior to acceptance.

The Contractor's proposed construction program shall be in the form of a bar chart (Gantt chart) or any other time-activity form acceptable to the Engineer. The program shall clearly show:

- (i) The proposed rate of progress in order to complete the Works within the required period as tendered, showing the various activities, their durations and proposed resourcing levels (major plant and labour) for each element of the Works. Sufficient detail shall be provided to enable the Engineer to be able to gauge construction progress. All activities, including establishment on site, trimming and finishing and the completion of all minor ancillary works are to be included in the program.
- (ii) The sequence of activities and any dependencies (time or resource related) between them.
- (iii) The critical path activities.
- (iv) Key dates in respect of work to be carried out, or information, etc., to be provided, by others.
- (v) The anticipated value of work to be done during each month.
- (vi) Other information specifically required by the Engineer.

When drawing up his programme, the Contractor shall, inter alia, take into consideration and make allowance for:

- (i) Expected weather conditions and its effects.
- (ii) Known physical conditions or artificial obstructions.
- (iii) Obtaining permits for all workers and staff, vehicle permits, vehicle operating permits for drivers and operators and radio operators, where applicable
- (iv) The accommodation and safeguarding of public.
- (v) Dealing with, altering and installing services.

- (vi) The reasonable requirements and programmes of the Employer.
- (vii) All other actions required in terms of this contract.

The following details shall be submitted together with the programme.

- (i) The number of working hours per day, working days per week, assumed holiday or shut down periods on which the programme is based.
- (ii) The overall labour and major plant resource levels on which the programme is based.
- (iii) The detailed traffic and construction plant accommodation proposals on which the programme is based.

The Contractor shall base its initial programme of work on the scope of the work as described in the project specification and the schedule of quantities. This programme shall be reviewed on a regular basis by the Contractor in accordance with changing circumstances, delays and amendments to the work ordered by the Engineer as a result of further examinations made by the Engineer.

Minor revisions to the approved program may be introduced from time to time by mutual agreement between the Employer, the Contractor, and the Engineer. Should the Engineer believe that a major revision of the program is required, the Contractor will be notified in writing and a revised program shall be submitted within two weeks of receipt of such notification.

It should be noted that it is in the Contractor's interest to provide a comprehensive program giving as much information as possible about the times allowed for the various activities as well as resources or other limitations affecting the program, since the approved program may be used to evaluate any claims in terms of the general conditions of contract for extensions of time.

2.7. Contractor's management, supervision and key people

The service provider must provide organogram from showing personal that will be onsite and their lines of authority / communication

The Contractor must have seniority Site Manager who:

- a) Is suitably qualified and experienced with HVAC knowledge, Electronics and Mechanical.
- b) Is suitably qualified and experienced to work on any electrical panels and mechanical components.
- c) Is able to successfully interact with Fire Protection Service Provider and OEM "hotline" personnel.
- d) Is of a level of seniority to successfully direct and manage Contractor staff and possible sub-contractors during construction stage and can successfully interact with airport operational staff and airport management.

2.8. Invoicing and payment

Within two days of receiving a payment certificate from the Project Manager in terms of core clause 51.1, the Contractor provides the Employer with a tax invoice showing the amount due for payment equal to that stated in the Project Manager's payment certificate.

The *Contractor* shall address the tax invoice to invoices.acsa@airports.co.za and include on each invoice the following information:___

- Name and address of the *Contractor*
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number **4930138393**
- The total Price for Work Done to Date which the *Contractor* has completed.
- Other amounts to be paid to the *Contractor*.
- Less amounts to be paid by or retained from the *Contractor*.
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT.

- (add other as required)

The Contractor attaches the detail assessment of the amount due to each tax invoice showing the Price for Work Done to Date for each item in the Price List for work which he has completed.

2.9. Insurance provided by the Employer

Refer to ACSA insurance clause Annexures

2.10. Contract change management

Refer to compensation event clauses in section 6 of the core clauses.

2.11. Provision of bonds and guarantees

The form in which a bond or guarantee required by the conditions of contract is to be provided by the Contractor is given in Part 1 Agreements and Contract Data, document C1.3, Securities.

The Employer will 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.

2.12. Training workshops and technology transfer

The contractor will perform an ongoing on job training workshops on each completion phase of the projects , as well as any obligation for technology transfer being included.

Training of ACSA staff and/or other stakeholders on operation and maintenance of the HVAC system

- Providing of system data and its components
- Recommending improvements on maintenance procedures
- Recommending improvements on operational procedures

3.Engineering and the *Contractor's* design

3.1. Employer's design

The Employer design is detailed in Part B of the Specifications including the operating philosophy / user requirements specification to which the Contractor is to comply when he is required to design the works. Design and specification are as per tender submission with associated documentation.

3.2. Parts of the works which the *Contractor* is to design

The Contractor shall ensure that the workshop design is fit for the purpose intended. As far as applicable to replacement, the design will be in accordance with the mutually already designed drawings and specification provided by the Employer

The Contractor is still liable if, after having made the equipment to details have been accepted, it fails because it did not comply with the Service Information. Failure to comply gives the Project Manager the right, but not the obligation, to reject the design.

3.3. Procedure for submission and acceptance of *Contractor's* design

The contractor's design as well as Employer specification and installation requirements as per tender submission will be used for this project. The As-built drawings to be prepared by the Contractor and submitted to the Project Manager for acceptance.

3.4. Other requirements of the *Contractor's* design

The contractor to ensure adherence to the specification as per tender documents and built the final product for purpose that is intended for.

3.5. Use of *Contractor's* design

The contractor to ensure adherence to the specification as per tender documents and built the final product for purpose that is intended for.

3.6. Design of Equipment

Contractor's design or proposed design of Equipment are to be shared with the Project Manager, not necessarily for his acceptance but as an assurance that the Equipment will be able to allow the Contractor to provide the Works efficiently and without delay.

3.7. Equipment required to be included in the *works*

The contractor may use any electrical equipment or tool to ensure the proper completion of works. The list of all tools to be used onsite to be presented as the part of safety file including the safe operating procedures for those tools.

3.8. As-built drawings, operating manuals and maintenance schedules

The contractor to provide As-built drawings, operating manuals and maintenance as stated in the Bill of Quantities as the part of the hand-over documentation.

4. Procurement

The Contractor will respect OEM warranties to the Employer always when procuring products or 3rd party services. It will be the Contractor's sole responsibility to ensure that OEM warranty requirements are adhered to always.

Where Contractors use or quote of a lower quality than recommended by the OEM, or parts not recommended by the OEM, this shall be clearly indicated to the Project Manager on the quotation. This also implies that the Contractor must build relationships with the various key OEM's.

Additional reference can be obtained on Part B of the Works Information/Specification

4.1. People

4.1.1. Minimum requirements of people employed on the Site

Personnel: Minimum requirements of people employed on the Site

- As per the Contractor's requirements to complete the Works.

ACSA Cape Town International Airport (CTIA) site is regarded as a National Key Point of Entry. The following National Key Point Requirements shall be adhered to:

- Criminal clearance check
- Zero alcohol tolerance
- Access to site through valid Permits
- Medical Clearance Certification

Service provider staff are not allowed to operate without valid permits at any time and Project Manager has a right to instruct the individuals contravening permit rules to leave the site and the service provider will be held accountable, and this may lead to contract termination.

The Contractor shall be compensated for costs relating to Employer required permits. The Contractor must ensure that he/she is, at all times, familiar with the Employer's safety and security requirements relating to permits in order for no services to be delayed as a result thereof. This includes the permit application process (available to the Contractor upon request).

The Contractor shall have no claim against the Employer in the event that a permit request is refused for reasons not attributable to the Employer. 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
Basement Parking permit	All vehicles allowed to enter the delivery basement	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 services	ACSA Safety / Fire & Rescue

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.

Use of cell phones on airside is not permitted unless the user is in possession of an appropriate Airport permit for the device. Cell phone permit issuing authority lies with the ACSA Security department. The Contractor shall not be allowed to use two-way radios at on the Employer's Premises unless these radios are of the type as approved by the ACSA IT department and are intrinsically safe.

Airport Training Courses

- a) AIT (Airside Induction Training)
Initial – R 2100 Excl. VAT
Permits – R271 Excl VAT
- b) AVOP (Airside Vehicle Operator Permit)- Required for driving on Airside.
Initial – R 2100 Excl. VAT
- c) General Security Awareness Training – R 960.00 Excl VAT (Excl. Vat)

4.1.2. BBBEE and preferencing scheme

- 1) In terms of the PPPFA Regulation 4, an organ of state can apply pre- qualifying criteria to advance certain designated groups
- 2) Only tenderers meeting the following criteria may submit proposals:

- a tenderer having a stipulated minimum B-BBEE status level of contributor 1 or 2; and
- an EME or QSE; and
- a tenderer subcontracting a minimum of 30% to-
 - (i) an EME or QSE which is at least 51% owned by black people; or
 - (ii) an EME or QSE which is at least 51% owned by black people who are youth; or
 - (iii) an EME or QSE which is at least 51% owned by black people who are women; or
 - (iv) an EME or QSE which is at least 51% owned by black people with disabilities; or
 - (v) an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships; or
 - (vii) an EME or QSE which is at least 51% owned by black people who are military veterans;

- 3) By submitting a Proposal, the bidder certifies that the information and documents provided are true, correct and devoid of any fraudulent misrepresentations. ACSA reserves its right to seek further legal action in the event that the bidder fails to comply with this paragraph.
- 4) A bidder that fails to meet the above- mentioned pre-qualification criteria, will be disqualified.

4.1.3. Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

The *Contractor* shall comply with the Accelerated Shared Growth Initiative- SA stated in **Annexure 5.9**

4.2. Subcontracting

4.2.1. Preferred subcontractors

No preferred subcontractor or supplier by Employer

4.2.2. Subcontract documentation, and assessment of subcontract tenders

As per Contract Participation Goals - CPG

4.2.3. Limitations on subcontracting

The Contractor may not subcontract more than 20% of the Works where a subcontractor is not an EME.

4.2.4. Attendance on subcontractors

As per the Contractor's requirements to complete the Works.

4.3. Plant and Materials

4.3.1. Plant & Materials provided “free issue” by the *Employer*

Plant & Materials provided “free issue” by the *Employer*

4.3.2. Contractor's procurement of Plant and Materials

The contractor to clearly state the lead times on Contractor's procurement of Plant and Materials. Contractor to ensure that the material procured are compliant with the specification on the tender document, where possible the procurement preference should be given to Black people suppliers.

4.4. Tests and inspections before delivery

The Contractor shall ensure that the HVAC System supplied equipment will have undergone all applicable factory acceptance and quality tests prior to delivery. Certification to be provided to the Employer accordingly.

4.5. Marking Plant and Materials outside the Working Areas

The Contractor shall ensure that all equipment is clearly marked and to be safely secured at all times when not in use.

4.6. Contractor's Equipment (including temporary works).

The Contractor shall ensure that all equipment is clearly marked and to be safely secured at all times when not in use.

5. Construction

5.1. Temporary works, Site services & construction constraints

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

Site Restrictions and Reference to Section 4.1

- The safety file should be completed and approved by the safety department before commencement of work. The safety file is a living document and must be continuously updated with all requirements as specified by law. Also, will be auditable from time to time.
- Personal Protective Equipment should be issued before the commencement of work.

5.1.2. Restrictions to access on Site, roads, walkways and barricades

The Contractor shall protect the site properly and shall so arrange his operations that the minimum danger and inconvenience is caused to airport operations. For this purpose, he shall, inter alia, provide and maintain sufficient signs, lights, barricades, fencing and guarding as may be necessary or required by Airports Company South Africa Limited or by any act, regulation or statutory authorities. add project-specific requirements in this section.

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

It is expected that contractors wear visible company uniform or reflector jackets with contractor name thereon when entering the premises as a form of identification. Permits to be displayed at all times whilst on site.

Proper inspections to be conducted daily on completion of day's work to ensure no Foreign Object Debris (FOD) e.g. screws, nut, wires, papers, insulation taps etc. are left on the tarmac or any manoeuvring area. Any damages or fatalities resulted due to Contractor's negligence on FOD management, the Contractor will be held liable for such action.

5.1.4. Health and safety facilities on Site

The Contractor shall comply with the health and safety requirements contained in **Annexure 5.4** to this Works Information.

5.1.5. Environmental controls, fauna & flora, dealing with objects of historical interest

The *Contractor* shall comply with the environmental criteria and constraints stated in **Annexure 5.5**

The Contractor will keep noise and dust levels to a minimum. At no time shall his/her work result in nuisance, interference or danger to the public or any other person working at the Airport.

At no time shall the Contractor:

- Allow any pollutive or toxic substance to be released into the air or storm water systems
- Interfere with, or put at risk, the functionality of any system or service
- Cause a fire or safety hazard

5.1.6. Title to materials from demolition and excavation

Not Applicable

5.1.7. Contractor's Equipment

Contractor to keep record of equipment onsite, service history etc. and keep a file onsite.

5.1.8. Equipment provided by the *Employer*

Not Applicable

5.1.9. Site services and facilities

The Contractor shall be entitled to use such supplies of electricity and water as may be available on the Site for the purpose of the Works and at his own expense, shall provide any apparatus necessary for such use.

The Contractor shall notify ACSA of any equipment or facility, which will be a consumer of electricity and water. The Contractor shall provide everything else necessary for Providing the Works".

5.1.10. Facilities provided by the *Contractor*

Facilities e.g. storage, site offices, vehicle, equipment provided by the contractor should be safeguarded by the contractor during the construction and be removed off site upon the completion of the contract

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

All operations required in connection with the Agreement shall, as far as the provisions of the Agreement permit, not unnecessarily or in an improper manner encroach upon the use of airport facilities.

The contractor is to take cognizance that the airport is used by others and other contractors may be on site for unrelated projects/services.

5.1.12. Setting out of the *works*

- Safety measures to be adhered to according OHS Act. Adhere to ACSA airside safety requirements regarding equipment, vehicles, and personnel operating on the airside.
- Full risk analysis on working on height, next to aircraft and airside and mitigation thereof to be considered as part of safety file requirements.
- Contractor to ensure that other Underground services, other existing services, cable and pipe trenches and covers are identified to prevent any disruption to these services due to contractor's activities.
- Contractor to take necessary steps to control noise, dust, water and waste during his/her activities onsite.

5.1.13. Sequences of construction or installation

Construction and installation must follow a logical and coordinated sequence of events as per the approved Project plan

5.1.14. Hook ups to existing works

The ACSA electrical team will facilitate this tie-in connection with reference to the notification of works to relevant stakeholders and the switching procedures.

5.2. Completion, testing, commissioning and correction of Defects

5.2.1. Work to be done by the Completion Date

All work to be done by the Contractor shall be completed by the Completion Date.

The Project Manager cannot certify Completion until all the 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.

5.2.2. Use of the *works* before Completion has been certified

The Employer may use any part of the works before Completion has been certified but if he does so he takes over the part of the works. Any defect must be attended to as stipulated in the defect clause.

5.2.3. Materials facilities and samples for tests and inspections

Not Applicable

5.2.4. Commissioning

The contractor to submit the commissioning procedures and plan to the Project Manager for approval. The commissioning procedure and plans will be adhered to during commissioning.

5.2.5. Start-up procedures required to put the *works* into operation

The contractor to ensure that he complies with all ACSA security, safety, environmental and operational requirements prior to the commencement of works complete accordingly.

5.2.6. Take over procedures

The works will be handed over partially or fully once commissioned and certified by Project Manager. The commissioning should be witnessed by both ACSA representative and the contractor representative.

5.2.7. Access given by the *Employer* for correction of Defects

The Project Manager arranges for the Employer to allow the Contractor access to and use of a part of the works which has been taken over if needed to correct a Defect. After the works have been put into operation, the Employer may require the Contractor to undertake certain procedures before such access can be granted.

5.2.8. Performance tests after Completion

The works performance will be checked against the design parameters for the duration stipulated in the warranty period. Any deviation to the performance will be rectified by the contractor at their own costs. Furthermore, clause X17 performance levels will be applied

5.2.9. Training and technology transfer

The contractor will perform an ongoing on job training workshops on each completion phase of the projects , as well as any obligation for technology transfer being included.

Training of ACSA staff and/or other stakeholders on operation and maintenance of the HVAC system

- Providing of system data and its components

- Recommending improvements on maintenance procedures
- Recommending improvements on operational procedures

5.2.10. Operational maintenance after Completion

Maintenance manuals, approved As-built drawings by City Council and training will be provided by the contractor on completion of works, including the certification of Completion of the works.

6.Plant and Materials standards and workmanship

6.1. Investigation, survey and Site clearance

Contract to ensure that a thorough inspection and clearance is conducted prior commencement of work of any other services that might be impacted by contractor's activities.

6.2. Building works

Product specification and installation standard to be compliant with National Building Regulations and applicable SANS standards

6.3. Civil engineering and structural works

Applicable SANS standards

6.4. Electrical & mechanical engineering works

Applicable SANS standards

6.5. Process control and IT works

Applicable standards

7.List of drawings

7.1. Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Note: Some drawings may contain both Works Information and Site Information.

Drawing number	Revision	Title
1000	Rev d	1000- SOB Offices Floor Plan Section
JD-2302-M-MA-102-A	Rev A	First Floor Plan: Ventilation Layout
JD-2302-M-MA-101-A	Rev A	Ground Floor Plan: Ventilation Layout
JD-2302-M-MA-101	Rev A	HVAC - Ground Floor Layout
JD-2302-M-MA-102	Rev A	HVAC – First Floor Layout

PART 4: SITE INFORMATION

The services are situated on the airside of Cape Town International Airport the services taking place on various and remote areas within the boundary limits of the Cape Town International Airport.

The works will be conducted on airside and landside, requiring hands-on management of the construction work, with consideration of the safety and security.

The airside is a restricted area with stringent access control measures put in place. The Contractor is reminded that this is a National Key Point and as such must adhere to all airport's rules and regulations regarding health safety, environment, security, fire and access control.

General Site Conditions

Temperature (Min - Max)	6°C to 40°C
Relative Humidity	15% to 75%
Wind	Varies daily
Height above Sea Level	46 m
Slope (Existing/Modified)	N/A
Seismic	N/A



PART 5: ANNEXURES

Item #	Reference	Description
1.	Annexure 5.1	Project Specification
2.	Annexure 5.2	ACSA Generic Occupational Health and Safety Specification
3.	Annexure 5.3	ACSA Baseline HIRA
4.	Annexure 5.4	Occupational Health and Safety Agreement
5.	Annexure 5.5	Environmental Terms & Conditions
6.	Annexure 5.6	ACSA Construction Environmental Management Plan
7.	Annexure 5.7	Contractor's Installation Conditions & House Rules
8.	Annexure 5.8	POPIA Agreement
9.	Annexure 5.9	Government's Programme for Broad-Based Black Economic Empowerment