



**AIRPORTS COMPANY SOUTH  
AFRICA SOC LIMITED**

**PROJECT NUMBER: KSIA7915/2025/RFP**

**TITLE OF PROJECT: THE CONTRACTOR APPOINTMENT FOR THE UPGRADING OF GENERATORS WHICH INCLUDES THE SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF THE GENERATOR SYSTEMS FOR A PERIOD OF 24 MONTHS AT KING SHAKA INTERNATIONAL AIRPORT.**

**NEC 3: ENGINEERING AND CONSTRUCTION CONTRACT (ECC)**

Between **AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED**

**Applicable at King Shaka International Airport (KSIA)**

(Registration Number: 1993/004149/30)

and [\_\_\_\_\_ - ]

(Registration Number: \_\_\_\_\_)

for **CONTRACTOR APPOINTMENT FOR THE UPGRADE OF (31) GENERATORS AT KING SHAKA INTERNANTIONAL AIRPORT FOR A PERIOD OF TWO (02) YEARS.**

<b>Contents:</b>	<b>No of pages</b>
Part C1 Agreements & Contract Data	[2 of 65]
Part C2 Pricing Data	[35 of 65]
Part C3 Scope of Works	[41 of 65]
Part C4 Site Information	[64 of 65]

## Part C1: Agreements and Contract Data

### C1.1: Form of Offer and Acceptance

#### OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of: **CONTRACTOR APPOINTMENT FOR THE UPGRADE OF (31) GENERATORS AT KING SHAKA INTERNANTIONAL AIRPORT FOR A PERIOD OF TWO (02) YEARS.**

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

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

#### THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(in words).....

.....  
Rands;

(in figures) R.....

#### THE OFFERED PRICES ARE AS STATED IN THE PRICING SCHEDULE

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

Signature(s)

Name(s) .....

Capacity .....

For the  
Bidder:

Name &  
signature of  
witness

*(Insert name and address of  
organisation)*

Date

---

## ACCEPTANCE

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s)

Name(s)

Capacity

for the  
Employer

**Airports Company South Africa SOC Limited**  
King Shaka International Airport  
King Shaka Drive  
La Mercy  
4405

Name &  
signature of  
witness

Date

## Schedule of Deviations

1 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
2 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
3 Subject .....	.....
Details .....	.....
.....	.....
.....	.....

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

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

### For the Employer

Signature (s)	.....
Name (s)	.....
Capacity	.....
Name and Address	<b>Airports Company South Africa SOC Limited</b> King Shaka International Airport King Shaka Drive La Mercy 4405
Name & Signature of witness	(Insert name and address of organisation)
Date	.....

### For the Bidder

## Part C1.2a Contract Data

### Part one – Data provided by the *Employer*

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

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for Main Option	
	Main Option	<b>B: Priced contract with Bill of Quantities</b>
	Dispute resolution Option	<b>W1: Dispute resolution procedure</b>
	Secondary Options (incorporating amendments)	<b>X2: Changes in the law</b> <b>X7: Delay damages</b> <b>X13: Performance Bond</b> <b>X16: Retention</b> <b>X18: Limitation of liability</b> <b>Z: Additional conditions of contract</b> of the NEC3 Engineering and Construction Contract, April 2013
10.1	The <i>Employer</i> is (Name)	Airports Company South Africa SOC Limited, King Shaka International Airport
	Address	1 Canelands Drive, Administration Office MSO Building King Shaka International Airport La Mercy 4407
	Telephone	032 436 6000
	Fax	032 436 6672
10.1	The <i>Project Manager</i> is	Pumelo Mpaka
	Address	1 Canelands Drive, Administration Office MSO Building King Shaka International Airport La Mercy 4407
	Telephone	0324366304
	E-mail address	
10.1	The <i>Supervisor</i> is	Sicelo Mdletshe

Address	1 Canelands Drive, Administration Office MSO Building King Shaka International Airport La Mercy 4407	
Telephone	0324369301	
Fax		
Email		
11.2	The works are	<b>UPGRADE OF (31) GENERATORS AT KING SHAKA INTERNATIONAL AIRPORT FOR A PERIOD OF TWO (02) YEARS</b>
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> <li>• Availability of As Built information.</li> <li>• Access to Site</li> <li>• Site Constraints and Constructability</li> <li>• Material delivery long lead items</li> <li>• Weather conditions</li> <li>• Existing services</li> <li>• Project Program delay</li> <li>• Payment delay</li> </ul>
11.2	The Works Information is in	Part C3 'Scope of Works' section of this contract
11.2	The Site Information is in	Part C4 'Works Information' section of this contract
11.2	The boundary of the site is	King Shaka International Airport (Airside and Restricted areas)
12.2	The law of the contract is the law of	the Republic of South Africa
13.1	The language of this contract is	English
13.3	The period of reply is	Seven (7) working days
<b>3</b>	<b>Time</b>	
31.2	The starting date is	Upon signing of the Contract by ACSA
11.2	The completion date is	24 months after signing of the Contract by ACSA
30.1	The access date is	One week after signing of the Contract by ACSA
31.1	The Contractor submits a first (preliminary) programme with the tender by the tender closing date	Two (2) weeks after the access date

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 works before the <i>completion date</i>	The <i>Employer</i> and Others will have access to the <i>works</i> during construction or prior to completion. Such access by the <i>Employer</i> and Others shall not relieve the <i>Contractor</i> from liability for the completion of the <i>works</i> in accordance with the <i>Works Information</i> and in terms of this contract.

#### **4 Testing and Defects**

42.2	The <i>defects date</i> is	Twelve (12) months after Completion of the whole of the <i>works</i>
43.2	The <i>defects correction period</i> is	Two (2) weeks

#### **5 Payment**

50.1	The <i>assessment interval</i> is	Four (4) weeks
50.1	The <i>currency of this contract</i> is	South African Rand
51.2	The period within which payment is made is	Four (4) weeks
51.4	The <i>interest rate</i> is	The prime lending rate of the Nedbank Bank, as determined from time to time

#### **6 Compensation events**

60.1	The <i>weather measurements</i> to be recorded for each calendar month are	the cumulative rainfall (mm) the number of days with rainfall more than 10 mm the number of days with minimum air temperature less than 0 degrees Celsius																												
60.1	The place where weather is to be recorded (on the Site) is	At the Construction Site Office and the records to be kept on site in a file clearly marked for this purpose																												
60.1	Assumed values for the ten-year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	<table border="1"> <thead> <tr> <th>Month</th> <th>Days</th> <th>Month</th> <th>Days</th> </tr> </thead> <tbody> <tr> <td>January</td> <td>1</td> <td>July</td> <td>4</td> </tr> <tr> <td>February</td> <td>1</td> <td>August</td> <td>3</td> </tr> <tr> <td>March</td> <td>2</td> <td>September</td> <td>2</td> </tr> <tr> <td>April</td> <td>2</td> <td>October</td> <td>2</td> </tr> <tr> <td>May</td> <td>3</td> <td>November</td> <td>2</td> </tr> <tr> <td>June</td> <td>3</td> <td>December</td> <td>1</td> </tr> </tbody> </table>	Month	Days	Month	Days	January	1	July	4	February	1	August	3	March	2	September	2	April	2	October	2	May	3	November	2	June	3	December	1
Month	Days	Month	Days																											
January	1	July	4																											
February	1	August	3																											
March	2	September	2																											
April	2	October	2																											
May	3	November	2																											
June	3	December	1																											

7	<b>Title</b>	No data required for this section of the <i>conditions of contract</i>
---	--------------	--

#### **8 Risks and Insurance**

84.1	The <i>Employer</i> provides these insurances	Refer to the Insurance Clauses which is attached at the end of the Contract Data
------	---	--

84.2	The <i>Contractor</i> provides the insurance stated in	The Insurance Clauses which is attached at the end of the Contract Data. The insurances are in the joint names of the Parties and provide cover for events which are at the Contractor's risk from the starting date until the Defects Certificate or a termination certificate has been issued.
	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract for any one event is:	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993
<b>9</b>	<b>Termination</b>	No data required for this section of the <i>conditions of contract</i>
<b>10</b>	<b>Data for Main Options</b>	
<b>B</b>	Priced contract with Bill of Quantities	Refer to Contract Data Part C2: Pricing Data, Bill of Quantities as per tender submission
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is	The person appointed jointly by the parties from the list of adjudicators contained below
W1.2	The <i>Adjudicator nominating body</i> is	The current Chairman of Johannesburg Advocate's Bar Council
W1.4	The <i>tribunal</i> is	Arbitration
W1.4	If the <i>tribunal</i> is arbitration, the arbitration procedure is	The <i>arbitration procedure</i> is set out in The Rules for the Conduct of Arbitrations 2013 Edition, 7th Edition, published by The Association of Arbitrators, (Southern Africa)
W1.4	The place where arbitration is to be held is	Johannesburg, South Africa.
W1.4	The person or organisation who will choose an arbitrator	The <i>Arbitrator</i> is the person selected by the Parties as and when a dispute arises in terms of the relevant Z Clause, from the Panel of Arbitrators provided under the relevant Z clause if the arbitration procedure does not state who selects an arbitrator. The Arbitrator nominating body is the Chairman of the Johannesburg Advocates Bar Council.
<b>12</b>	<b>Data for Secondary Option Clauses</b>	
<b>X7</b>	<b>Delay Damages</b>	
	Delay damages of the works are	Amount per day is 0.05%, to the maximum of 10% of the Contract value
<b>X13</b>	<b>Performance bond</b>	

X13.1	The amount of the performance bond is	10% of the contract value. Pro-forma draft of a performance bond to be used is attached to this contract.
-------	---------------------------------------	---

## X16 Retention

X16.1	The <i>retention percentage</i> is	5% of the Contract value.
-------	------------------------------------	---------------------------

## X18 Limitation of Liability

X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	The Total damages suffered and/or costs incurred to the <i>Employer's</i> Property
X18.3	The <i>Contractor's</i> total liability to the <i>Employer</i> for defects due to his design which are not listed on the Defects Certificate is limited to	The Total damages suffered and/or costs incurred to the <i>Employer's</i> Property
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to	The Contractor's total direct liability to the Employer for all matters arising under or in connection with this contract, other than the excluded matters, is limited to the Total damages suffered and/or costs incurred to the <i>Employer's</i> Property and applies in contract, tort or delict and otherwise to the extent allowed under the law of the contract.

The excluded matters are amounts payable by the Contractor as stated in this contract for

- Loss of or damage to the *Employer's* property,
- Delay damages,
- Defects liability,
- Insurance liability to the extent of the Contractor's risks
- loss of or damage to property (other than the *works*, Plant and Materials),
- death of or injury to a person.
- damage to third party property; and
- infringement of an intellectual property right

## Z The *Additional conditions of contract* are Z1 – Z20

### Amendments to the Core Clauses

#### Z1 Interpretation of the law

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

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

The *Contractor* ensures that the performance bond is valid and enforceable until the end of the *contract period*. If the terms of the performance bond 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

---

**Z7 Limitation of liability:**

---

**Insert the following new clause as Option X18.6:**

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

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

---

**Additional Z Clauses**

---

**Z8 Cession, delegation, and assignment**

---

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

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

---

---

**Z9 Joint and several liability**

---

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

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

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

---

**Z10 Ethics**

---

**Z10.1** The *Contractor* undertakes:

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

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

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

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

---

**Z11** **Confidentiality**

---

**Z11.1** All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the *Contractor* and shall not be used or divulged or published to any person not being a party to this contract, without the prior written consent of the *Project Manager* or the *Employer*, which consent shall not be unreasonably withheld.

**Z11.2** If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the *Project Manager*.

**Z11.3** This undertaking shall not apply to –

**Z11.3.1** Information disclosed to the employees of the *Contractor* for the purposes of the implementation of this agreement. The *Contractor* undertakes to procure that its employees are aware of the confidential nature of the information so disclosed and that they comply with the provisions of this clause;

**Z11.3.2** Information which the *Contractor* is required by law to disclose, provided that the *Contractor* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Contractor* may disclose such information only to the extent required by law and shall use reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed;

**Z11.3.3** Information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time);

**Z11.4** The taking of images (whether photographs, video footage or otherwise) of the works or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*

**Z11.5** The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

---

**Z12** **Employer's Step-in rights**

---

**Z12.1** If the *Contractor* defaults by failing to comply with his obligations and fails to remedy such default within 2 weeks of the notification of the default by the *Project Manager*, the *Employer*, without prejudice to his other rights, powers and remedies under the contract, may remedy the default either himself or procure a third party (including any subcontractor or supplier of the *Contractor*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Contractor*

**Z12.2** The *Contractor* co-operates with the *Employer* and facilitates and permits the use of all required information, materials and other matter (including but not limited to documents and all other drawings, CAD materials, data, software, models, plans, designs, programs, diagrams, evaluations, materials, specifications, schedules, reports, calculations, manuals or other documents or recorded information (electronic or otherwise) which have been or are at any time prepared by or on behalf of the *Contractor* under the contract or otherwise for and/or in connection with the *works*) and generally does all things required by the *Project Manager* to achieve this end.

---

**Z13 Liens and Encumbrances**

---

**Z13.1** 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

---

**Z14 Intellectual Property**

---

**Z14.1** Intellectual Property (“IP”) rights means all rights in and to any patent, design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works.

**Z14.2** IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works*.

**Z14.3** The *Contractor* gives the *Employer* an irrevocable, transferable, 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*

**Z14.4** 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

**Z14.5** 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:

**Z14.5.1** the *Contractor*’s design, manufacture, construction or execution of the Works

**Z14.5.2** the use of the *Contractor*’s Equipment, or

**Z14.5.3** the proper use of the Works.

**Z14.6** 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:**

---

**Z16.1 Appointment of the  
Adjudicator**

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

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

#### Panel of Adjudicators

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

#### Z16.2 Appointment of the Arbitrator

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

#### Panel of Arbitrators

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

#### Z17 Notification of a compensation event

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

#### Z18 BBBEE Certificate

---

**Z18.1** The *Contractor* shall be expected to annually present a compliant BEE Certificate. Failure to do adhere to these requirements shall be considered a material breach of the conditions of this Contract, the sanction for which may be a cancellation of this Contract.

---

**Z19** **Communication**

---

**Z19.1** **Add a new Core Clause** 14.5 and 14.6 to read as follows:  
The *Project Manager* requires the written consent of the Employer if an action will result in a change to the design, scope, and Works information that is 5% or more

**Z19.2** The *Project Manager* requires the written consent of the Employer if an action will result in the Completion Date being extended by more than 30 days.

---

**Z20** **Delegation**

---

As stipulated by Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993 as amended the *Contractor* agrees to the following:

**Z20.1** As part of this contract the *Contractor* acknowledge that it (mandatory) is an employer in its own right with duties as prescribed in the Occupational Health and Safety Act No 85 of 1993 as amended and agree to ensure that all work being performed, or Equipment, Plant and Materials being used, are in accordance with the provisions of the said Act, and in particular with regard to the Construction Regulations

---

## **PART C1.2b CONTRACT DATA**

### **PART TWO – DATA PROVIDED BY THE CONTRACTOR**

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

Name:

Job:

Responsibility:

Qualifications:

Experience:

---

Name:

Job:

Responsibility:

Qualifications:

Experience:

---

11.2	The <i>completion date</i> is	24 months after signing of Contract by ACSA
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"><li>• Existing Services</li><li>• Access to Site</li><li>• Delay in supply of material and/or equipment</li><li>• Progress of the works against the program</li><li>• Travelling public and ACSA stakeholders</li><li>• Material delivery lead items</li><li>• Existing services</li><li>• Project Program delay</li><li>• Payment delay</li><li>• Load shedding schedule</li></ul>
11.2	The <i>Works Information</i> is in	Part C3 'Scope of Works' section of this contract
31.1	The programme identified in the	Program schedule as per tender submission

---

## Part C1: Agreements and Contract Data

### C1.3: Form of Guarantee

#### PRO FORMA FOR PERFORMANCE BOND

#### PERFORMANCE BOND

##### [TO BE REPLICATED ON BANK'S LETTERHEAD]

Brief description of contract.....

Name and address of Beneficiary.....

..... (whom the contract defines as the Contractor).

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

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

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

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

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

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

Signed at ..... on ..... 20....

For:

**Registration Number:**

---

#### Name & Position

As witnesses:

1. ....

2. ....

## **PART C1: AGREEMENTS AND CONTRACT DATA**

### **C1.4: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT**

#### **OCCUPATIONAL HEALTH AND SAFETY AGREEMENT**

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

#### **OBJECTIVES**

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

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

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

**The parties to this Agreement are:**

**Name of Organisation:**

**AIRPORTS COMPANY SOUTH AFRICA  
King Shaka International Airport**

**Physical Address:**

**Airport Company South Africa  
1 Canelands Drive, Administration Office MSO Building  
King Shaka International Airport  
La Mercy  
4407**

**Hereinafter referred to as “Client”**

**Name of organisation:**

**Physical Address**

**Hereinafter referred to as “the Mandatary/ Principal Contractor”**

## MANDATORY'S MAIN SCOPE OF WORK

### GENERATORS UPGRADE PROJECT

---

#### GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

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

#### THE UNDERTAKING

The Mandatary undertakes to comply with:

#### INSURANCE

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

#### COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

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

1. All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.

2. The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHSAct 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatary shall ensure that he/she familiarise himself/herself with the requirements of the OHSAct 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatary shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
5. The Mandatary shall appoint competent persons who shall be trained on any Occupational Health & Safety aspect pertaining to them or to the work that is to be performed.
6. The Mandatary shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
7. Any personal protective equipment required shall be issued by the Mandatary to his/her employees and shall be worn at all times.
8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
9. No unsafe equipment/machinery and/or articles shall be used by the Mandatary or contractor on the Client's premises.
10. All incidents/accidents referred to in OHSAct shall be reported by the Mandatary to the Provincial Director: Department of Labour as well as to the Client.
11. No user shall be made by the Mandatary and/or their employees and or their subcontractors of any of the Client's machinery/article/substance/plant/personal protective equipment without prior written approval.
12. The Mandatary shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duty completed approved permit.
13. The Mandatary shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client's premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
14. Full participation by the Mandatary shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.

## FURTHER UNDERTAKING

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

## ACCEPTANCE BY MANDATARY

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

I ..... a duly authorised 16.2 Appointee acting for and on behalf of .....(company name) undertake to ensure that the requirements and the

provision of the OHSAct 85 of 1993 and its regulations are complied with.

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

Expiry date .....

**SIGNATURE ON BEHALF OF MANDATARY**

(Warrant his authority to sign)

**DATE**

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

**DATE**

## PART C1: AGREEMENTS AND CONTRACT DATA

### C1.5: ACSA INSURANCE CLAUSES

#### INSURANCE CLAUSES FOR AIRSIDE CONSTRUCTION CONTRACTS WHERE THE AWARDED CONTRACT VALUE DOES NOT EXCEED R150 MILLION, AND THE CONSTRUCTION PERIOD DOES NOT EXCEED 36 MONTHS, AND THE DEFECTS LIABILITY PERIOD DOES NOT EXCEED 24 MONTHS

Each Party shall be responsible for effecting and maintaining the relevant insurances as specified below and to the extent relevant to the Contract.

##### **1. Insurance Effected By The Employer (Principle Controlled Insurance ("PCI"))**

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

###### **a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability**

###### **Section 1 Of The Policy – Contract Works**

**Contract Works Insurance** for the full value of the Works to provide cover against accidental physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works all being the subject matter of this Contract including to the extent provided for in the policy whilst in transit or temporarily stored at any premises en route to or from the Site (other than where this is a continuation of Marine Transit) within the territorial limits of the policy.

This insurance may specifically exclude any cost necessary to replace or rectify any of the property insured, which is in a defective condition due to defect in design, plan specification, material or workmanship.

This insurance contains the following limitations and warranties;

###### ***Open Trench Limitation***

*In respect of loss or damage to open trenches and pipes, conduits or cables laid therein, caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of open trenches at any one time to 2,500 meters.*

*Exposed Layer Works (applicable to works involving paving, roadways, bulk earthworks and runways and taxiways)*

*In respect of loss or damage to Exposed Layer Works relating to paving, roadways and runways (including taxiways) caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of Exposed Layer Works at any one time to 2,500 meters.*

## **1 SECTION II OF THE POLICY – CONTRACTORS PUBLIC LIABILITY**

**Public Liability Insurance** which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of **R100,000,000** in respect of any one occurrence or series of occurrences consequent on or attributable to one source or original cause.

### **Section III of the Policy – Removal Of Lateral Support Liability**

**Removal Of Lateral Support Liability** which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising out of or in connection with shock or vibration or the removal or weakening of or interference with support to property in the vicinity of the Contract Site and arising out of or in connection with the Insured Contract (but not in respect of tunneling works) and occurring during the Period of Insurance.

The Limit of Indemnity being limited to R50,000,000 attributable to one source or original cause

- b. Contract Works SASRIA** – Providing physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works as covered by the underlying Contract Works policy as noted in (a) above due to perils as covered in terms of the SASRIA Contract Works wording as issued by SASRIA SOC.  
The Contract Works SASRIA cover excludes consequential or indirect loss or damage of any kind or description whatsoever.

The SASRIA Contract Works policy is limited to **R500,000,000 (Incl VAT)** in the aggregate during the policy period of insurance.

The Contract Works SASRIA policy wording can be obtained from the SASRIA website <http://www.sasria.co.za/> which notes the covers and policy exclusions.

- c. Aviation Liability Insurance** which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of **R2,000,000,000** in respect of any one occurrence or series of occurrences consequent on or to one source or original cause.

This insurance is in respect of liability relating to aircrafts.

d) **Design & Construct Professional Indemnity Insurance** which provides indemnity against legal liability to pay compensation as a result of any actual or alleged negligent act, error or omission in the performance of the Professional Duties of the insured and arising from the execution of this project. The limit of indemnity under this insurance shall be **\*R25,000,000 in the aggregate during the annual policy period of insurance that ACSA effect such cover during the policy period from 1 April to 31 March during each policy period of insurance.**

*\*The limits of indemnity applies to all ACSA contracts as a whole and does not apply specifically to this contract. The aggregate limit could be exhausted by claims under other ACSA contracts and there is no guarantee that this insurance cover will provide sufficient cover to this specific contract should the aggregate limit be exhausted.*

The Policy only covers the rectification of the works and excludes all consequential losses. Professional Duties do not include:

- a) Labour and construction work which would normally be the responsibility of the building or engineering contractor.
- b) Supervision of the construction works usually undertaken by a building or engineering contractor.

1.2 The **Contractor** shall familiarise itself fully with the details of such insurance effected by the Employer. The Contractor shall comply to all the terms and conditions of the Employer arranged policies and the Contractor shall be deemed to be fully aware of all the conditions, limits, limitations, exclusions/exceptions and deductibles that are contained in the Employer arranged policies. Copies of the Employer arranged policies are obtainable on request from the Employer and if the Contractor is of the opinion that additional insurance is required, such shall be for the Contractors account.

- 1.3 The Employer shall pay the premium in connection with the insurances effected by the Employer. The Employer is entitled to all return premiums, dividends, discounts, or adjustments in connection with the insurances effected by the Employer.
- 1.4 The Contractor shall not include any premium charges for this insurance except to the extent, which he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor.

In the event that the Contractor purchases any insurances in addition to those indicated above, the premium and taxes, duties, etc. shall be borne entirely by the contractor.

- 1.5 Any further clarification of the scope of cover provided by the Policies arranged by the Employer should be obtained from the Employer.
- 1.6 The Contractor and/or any other party who obtains indemnity under the policies effected under 1.1 shall become liable for the deductibles (first amount payable) which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or cause giving rise to loss or damage or indemnifiable liability. The deductibles applicable to the policies effected under 1.1 are as follows:

**a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability**

Unless stated otherwise in the Policy Extensions the Deductibles shall be as follows which will apply in respect of each and every occurrence or series of occurrences arising out of or in connection with any one event giving rise to loss or damage:

**Section 1 Of the Policy – Contract Works**

In respect of all loss or damage **R150,000** but increased to **R250,000** in respect of loss or damage arising out of or in connection with testing and commissioning.

**Section 2 Of the Policy – Contractors Public Liability**

**R75,000** each and every claim in respect of Property Damage.

**Section 3 Of the Policy – Removal Of Lateral Support Liability**

**R75,000** each and every claim.

**b) Contract Works SASRIA**

In respect of theft as a result of the SASRIA perils insured - **R25,000** each and every occurrence.

c) **Aviation Liability Insurance:**

In respect of each and every loss or damage or injury – **R300 000.**

d) **Design & Construct Professional Indemnity Insurance**

- a) In respect of contracts under R50 million at award – **R5,000,000.**
- b) **In respect of contracts over R50 million at award – R10,000,000**

1.7 In the event of any occurrence which is likely to give rise to a claim under the insurance arranged by the Employer, the Contractor shall:

- a) In addition to any statutory requirement or other requirements contained in the Contract immediately notify the Employer and the Employer's Insurance Brokers by telephone, mobile phone or email giving the circumstances, nature and an estimate of the loss or damage or liability. The Contractor must also complete the Claim Advice Form (Appendix "A" ).

The following persons/insurers must be advised immediately on the occurrence of a claim on site or even a possibility of a claim arising due to an incident occurring on site:

Airports      Company      South      Africa:

Nokulunga Masiza

Tel: +27 (0)11 723 1400

M: +27 (0)79 512 0532

[Nokulunga.Masiza@airports.co.za](mailto:Nokulunga.Masiza@airports.co.za)

Buhle Mnguni

D: +27 (0)11 723 1400

M: +27 (0)74 535 9075

[Buhle.Mnguni@airports.co.za](mailto:Buhle.Mnguni@airports.co.za)

- b) Preserve damage and make it available for inspection by a representative of the Insurers.
- c) Wherever possible, photographs of damage should be taken.
- d) Inform the police authorities promptly in the event of loss or damage by theft, burglary or any malicious persons(s) for the purpose of recovering any property so lost, discovering the guilty person or persons, and having him, her or them duly prosecuted.
- e) Advise the Insurers of any other insurance(s) which may cover the same loss, damage or injury, or any part thereof.
- f) Give to the Insurers every assistance to enable the Insurers to settle or resist any claim against the Insured, or institute any proceedings;
- g) On completion the Claims Advice Form, the form must be sent to the Employers Insurance Brokers for further action (the original may be emailed to the Employers Insurance Broker). (Please do not remove the Claims Advice Form out of this document. Rather photocopy the form and send the copy to the Employers Insurance Brokers).
- h) The Employer and the employers Insurance brokers / Insurers or their appointed loss adjusters shall have the right to make all and any enquiry's on the Site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall co-operate in carrying out such enquiry's.
- i) The Contractor, Project Managers and Consultants must allow free access to Insurers' assessors for the purpose of investigating and assessing the loss or damage.
- j) **The Contractor must not proceed with the making good any off the loss without the prior authorisation of the Insurers.**
- k) The Contractor must keep separate records of the costs involved in making good any loss or damage and these records should be available at all times for inspection by Insurers. Such records should include inter alia the entire cost of labour, materials, transport and equipment.
- l) Where required by the Employer, negotiate the settlement of claims with the Insurer or their appointed loss adjusters through the Employer's Insurance Brokers and shall obtain the Employer's approval of such settlement.

- m) Once the amount of a claim is agreed by the Insurers and the Contractor, an "Agreement of Loss" form must be signed by the Contractor and if required this shall be counter signed by the Employer or the Project Managers.
- n) The proceeds of such claim will, if required by the Employer, be paid net of any Deductible applicable under the policy by the Insurers to the Employer who on receipt thereof will arrange for payment to be made in terms of the Conditions of Contract. In the event that it is agreed by the Employer that such claims payment be made directly to the Contractor, the Contractor shall arrange for the Employer to endorse the "Agreement of Loss" to this effect.

**2. Insurance Effected by the Contractor.**

**In addition to Clause 1.1 in respect of the insurances effected by the Employer the following Insurances to be effected by the Contractor :**

2.1 Without limiting the Contractor's obligations, responsibilities and liabilities, the Contractor and Sub-contractor shall maintain at the Contractor's and Subcontractor's expense and where applicable provide as a minimum the following insurances:

- a) **Insurance of Construction Plant and Equipment** (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.

The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

**b) Contractor's Common Law Liability/ Worker's Compensation Insurance**

The Contractor shall take out and maintain employer's liability insurance with a limit of indemnity of not less than **R20,000,000** and/or workmen's compensation insurance covering personal injury to or death of the employees of the Contractor engaged in connection with the Works to the minimum value required by applicable law.

The Contractor shall procure that its Subcontractors take out and maintain similar insurance in respect of its Subcontractor's personnel performing the Works.

In the event that a claim is made against the Employer in connection with such insurance, the Contractor shall indemnify and hold harmless the Employer against any such claim. The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

- c) **Motor Vehicle Liability Insurance** comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability indemnity with a limit of indemnity of not less than **R5 000 000** for all owned, non-owned, leased and hired vehicles.

- d) **Insurance For Buy-Down Cover Of Employer's Deductibles**

Should the Contractor believe that the Employer effected Contract Works, Public Liability and Design & Construct Professional Indemnity deductibles as noted in Clause 1.6 (a),(c) and (d) be considered to be unacceptable to the Contractor, then the Contractor must obtain Buy Down cover for these deductibles to a deductible considered by the Contractor as being acceptable in respect of the works being undertaken.

- e) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by endorsement to the relevant Policies of Insurance.

Such insurance shall name Employer as an additional insured, and shall be primary to any insurance maintained by the Employer.

- f) **Public Liability** insurances in excess of the Employers Public Liability insurances as stated under clause 1.1(a).

- g) **Aviation Liability** insurances in excess of the Employers Aviation Liability insurances as stated under clause 1.1(c).

- h) **Contractor's Professional Indemnity Insurance** in excess of the Employers Design & Construct Professional Indemnity insurances as stated under clause 1.1(d) and if applicable to cover the deductible that applies to the Employer effected insurance.

- i) **Marine Cargo Insurance (If Applicable)**

**Cover :** Imports of cargo, equipment, goods, plant, machinery and materials ("Insured Property") to the site where the Permanent Works will be constructed.

**Sum Insured:** Not less than the value of the largest single cargo shipment, conveyance or the value in storage, whichever is the greater (CIF plus 10%).

Marine / Air Cargo Insurance covering the Insured Property against all risks of physical loss or damage while in transit by land, sea or air from country of origin anywhere in the world to the site where the Permanent Works will be constructed including loading, or vice versa, from the commencement of the time the insured items are loaded prior leaving the warehouse or factory for shipment to the said site.

The insured parties are the Employer, the Contractor and its Subcontractors, and all their personnel involved in the execution of any Works on the construction site.

**j) Miscellaneous Insurance**

Other insurance as is customary, desirable or necessary to comply with applicable Laws in the Country.

- 2.2 The insurances to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance/defects liability period). The Contractor shall within twenty eight (28) days of commencement of the contract produce to the Employer the relevant Policy or Policies of Insurance.
- 2.3 In the event that the Contractor or his Sub-contractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the Employer in writing of such cancellation or restriction and shall advise what action the Contractor or his Sub-contractor will take to remedy such action.

If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.

**2.4 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 sub contract agreement between the Contractor and Sub-Contractor and where applicable that the Sub Contractor 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.za](mailto:Nokulunga.Masiza@airports.co.za)

\*.....

[Buhle.Mnguni@airports.co.za](mailto:Buhle.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 : \_\_\_\_\_

Locality of Incident \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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:

## C2.1 Pricing assumptions: Option B

### C2.1 Pricing Assumptions and General Notes

1. All Prices are to be shown excluding VAT unless instructed otherwise stated by the Employer in Tender Data or in an instruction the Employer has given before the bidder enters his Prices.
2. If there is insufficient space in the Price List which follows, state in which document the Price List is contained.
3. All prices are fixed and firm.
4. There is no CPI escalation on the prices
5. Prices must include customs and duties for items procured overseas.
6. Provision is made on the Final Summary for the applicable Value Added Tax to be added, or not added, as indicated.
7. Abbreviations which may be used in the reference Bills of Quantities are as follows:

mm	=	millimetre	MPa	=	megapascal
m	=	metre	h	=	hour
km	=	kilometre	kg	=	kilogram
m <sup>2</sup>	=	square metre	t	=	ton (1000 kg)
m <sup>2</sup> .pass	=	square metre-pass	No.	=	number
ha	=	hectare	sum	=	lump sum
m <sup>3</sup>	=	cubic metre	MN	=	meganewton
m <sup>3</sup> .km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	kW	=	kilowatt
MI	=	megalitre	%	=	percent

8. All prices shall be tendered in South African Rands.
9. Principal Contractor to make allowances for Option X13 and X16 as it might have an effect on the Contractor's cash flow.
10. Principal Contractor to make allowances for the maintenance of the 31 backup generators during the defects free period in line with the Original Equipment Manufacturer's specifications and Employer requirements.
11. Principal Contractor to make allowances for night works especially where there is only one unit for essential supply.

### C2.2 Bill of Quantities

Works for this bid to be carried out during the day (viz 06h00-18h00) and after the last flight and before the first flight viz. from 22:00 – 04:00.

Part A: Preliminary and General					
Item	Description	UOM	QTY	Price per Unit	Total Price Excl. VAT.
1	Site establishment and removal, cleaning and rehabilitation after the completion of the works. (Value based)	Sum	1	R	R
2	Provisional Allowance for Permits, General Security Awareness Training and Airside Induction Training for the contract duration (to be claimed on proven cost).	Provisional Sum	1	R50 000	R50 000

3	Health and Safety Regulations	Sum	1	R	R
3.1	Cost of Health and Safety measures to be taken in relation to the Construction Regulations (2003), including maintenance of the health and safety file.	Sum	1	R	R
4	Provision of Lifting Equipment and or Mobile Cranes including the operator for the duration of the contract (to be claimed on proven cost)	Sum	1	R	R
5	Provisional Sum for Materials and other Consumables costs (Claim on proven cost)	Provisional Sum	1	R1 500 000.00	R1 500 000.00
6	Provision for electrical wiring Cost (Claim on proven cost)	Sum	1	R	R
<b>Total Part A: Excluding VAT</b>					<b>R</b>

<b>Part B: Equipment Supply and Delivery</b>					
<b>Item</b>	<b>Description</b>	<b>UOM</b>	<b>QTY</b>	<b>Price per Unit</b>	<b>Total Price Excl. VAT.</b>
1	1000 litre diesel bowser tanker trailer, all SANS, Road, NERSA and Traffic and OHS regulations to be adhered to, properly labelled in accordance with the Transportation of Dangerous Goods Regulation refer to part C3. Including 5kg Fire Extinguisher (1.1Equipment delivery/Supply)	Each	1	R	R
2	Complete Generator coolant system (Coolant Pumps, heater jacket, Thermostat, Coolant Hoses and Pipes, Coolant, Belts, Temperature Sensors / Gauges and Control Wiring and Relays) for different Gensets	Each	31	R	R
3	Complete plastered Bund wall material for all generators at 110% of the fuel capacity	Each	31	R	R
4	Fusible link with shut off valves at the corresponding generator fuel pipe sizes including accessories for all 13 x indoor generators	Each	13	R	R
5	Complete artificial intrinsically safe ventilation fans for AS1, AS2, AS3, AS4, A2, ATC, MSP Substations, Terminal Generator Room diesel tank for 80 cubic metre room.	Each	12	R	R
6	Digital level gauge including accessories for 4 x 10 000 litres tanks, display to be placed next to the generators (AS1, AS2, AS3 & AS4 Substations.	Each	4	R	R
7	Waterproof, intrinsically safe fuel level gauge including accessories for 4x underground tanks. 1 x MSP (15 000l), 2 x ATNS (15 000l) and 1 x Terminal Substation (23 000l)	Each	4	R	R
8	Fuel base tank (Stainless steel, anti-	Each	19	R	R

	rust, marine grade) with analog fuel level gauge and digital input to be displayed on the controller for all 19 x outdoor generators. Design, fabricate and supply new galvanized steel Generator bases maintaining the existing thickness and spray paint to match the colour of generator.				
9	Deep Sea Engine Control Units (ECU) or Engine Control Modules (ECM)	Each	31	R	R
10	Automatic changeover controllers with key switch for 12 x indoor generators and 19 x outdoor generators	Each	31	R	R
11	Deep Sea Electronics (DSE) controller DSE8660Auto Mains (Utility) Failure Control Module and including panel door.	Each	31	R	R
12	Provide HMI system with PLC compatible to the Deep-Sea Controller including developing the software, remote access, device graphic layout, maintenance and support service, back-up system, PC, installation, 55" screen mounted on the wall, licence for Windows and Microsoft Office Business, completed set of drawings and user manuals.	Each	1	R	R
13	Provisions for Fibre link for all generators, including, splicing, terminations, splice and patch panels and dome enclosures to ensure complete installation to the HDMI above. (Re-measurable)	Metres	4 000	R	R
14	Static Advanced VAR rectifier circuits respective to each KW size	Each	31	R	R
15	Fuel system pumps of 500W, 1400rpm, 50Hz, 3.5A with filters	Each	31	R	R
16	Supply Synchronization system for all generators to enable smooth transition of the load from generator power to mains supply and online testing from mains to generator without power interruption.	Each	31	R	R
17	Re-paint and re-spray paint the outdoor generator housing to match the colour of generator. Repaint the indoor generators parts to match the current generator	Each	31	R	R
14	105A Maintenance free batteries	Each	62	R	R
15	Anti-freeze in 20 Litres	Each	31	R	R
16	Complete Generator Overhaul at Basement and MSP: <ul style="list-style-type: none"> <li>• Cylinder head removal and inspection.</li> <li>• Piston, rings, liners replacement.</li> </ul>	Each	4	R	R
17	Caution Labels (Automatic Start, Maintenance Required, Emergency Generator, Dual Supply) and Warning/Danger Labels (2nd Power	Each	279	R	R

	Source, Arc Flash/Shock, High Voltage, Carbon Monoxide) on the generator container as specified. Set of Warning Notices as per SANS and OHS specifications. Warning notices on the container as specified on four side of each generator at the correct sizes. Set of Warning Notices as per SANS and OHS specifications.				
<b>Total Part B: Excluding VAT</b>					<b>R</b>

<b>Part C: Installation and Testing</b>					
<b>Item</b>	<b>Description</b>	<b>UOM</b>	<b>QTY</b>	<b>Rate per Unit</b>	<b>Total Price Excl. VAT.</b>
1	Install a Complete Generator coolant system for different genset brands as per the OEM recommendations, refer to part C3 for Generator specifications	Each	31	R	R
2	Bund wall for all generators at 110% of the fuel capacity	Each	31	R	R
3	Fusible link with shut off valve including accessories for all 13 x indoor generators.	Each	13	R	R
4	Complete artificial intrinsically safe ventilation fans for AS1, AS2, AS3, AS4, A2, ATC, MSP Substation and Terminal Generator Room diesel tank for 80 cubic metre room.	Each	12	R	R
5	Digital level gauge including accessories for 5 x 10 000 litres tanks, display to be placed next to the generators (AS1, AS2, AS3, AS4 and A2 Substations).	Each	5	R	R
6	Waterproof, intrinsically safe fuel level gauge including accessories for 4x underground tanks.1 x MSP, 2 x ATNS and 1 x Permit Office (Basement) Substations. Conduct complete underground tank pressure testing and diesel purification	Each	4	R	R
7	Fuel base tank (Stainless steel, anti-rust) with analog fuel level gauge and digital input to be displayed on the controller for all 19 x outdoor generators	Each	19	R	R
8	Digital level gauge including accessories for 4 x 10 000 litres tanks, display to be placed next to the generators (AS1, AS2, AS3 & AS4 Substations.	Each	4	R	R
9	Design, fabricate and supply new galvanized steel Generator bases maintaining the existing thickness and spray paint to match the colour of generator. Fuel base tank (Stainless steel, anti-rust) with analog fuel level gauge and digital input to be displayed on the controller for all 19 x outdoor generators	Each	19	R	R
10	Deep Sea Engine Control Units (ECU) or Engine Control Modules (ECM)	Each	31	R	R

11	Automatic changeover controllers with key switch for 12 x indoor generators and 19 x outdoor generators	Each	31	R	R
12	Deep Sea Electronics (DSE) controller DSE8660 Auto Mains (Utility) Failure Control Module including panel door.	Each	31	R	R
13	Provide HMI system with PLC compatible to the Deep-Sea Controller including developing the software, remote access, device graphic layout, maintenance and support service, back-up system, PC, installation, 55" screen mounted on the wall, licence for Windows and Microsoft Office Business, completed set of drawings and user manuals.	Each	1	R	R
14	Provisions for Fibre link for all generators, including, splicing, terminations, splice and patch panels and dome enclosures to ensure complete installation.	Metres	4 000	R	R
15	Static Advanced VAR rectifier circuits respective to each KW size	Each	31	R	R
16	Fuel system pumps of 500W, 1400rpm, 50Hz, 3.5A with filters	Each	31	R	R
17	Supply Synchronization system for all generators to enable smooth transition of the load from generator power to mains supply. And testing from mains to generator online	Each	31	R	R
18	Supply, delivery, construct repaint and spray paint to match the colour of generator for both indoors and outdoors generators. Re-painting the generator covers and generator parts	Each	31	R	R
20	105A Maintenance free batteries	Each	62	R	R
21	Refill Anti-freeze in 20 Litres	Each	31	R	R
22	Complete Generator Overhaul at Basement and MSP: <ul style="list-style-type: none"> <li>• Cylinder head removal and inspection.</li> <li>• Piston, rings, liners replacement.</li> <li>• Crankshaft inspection and bearing replacement.</li> <li>• Timing gear inspection and adjustment.</li> </ul>	Each	4	R	R
23	Install warning notices on the container, set of Warning Notices as per SANS and OHS specifications.	Each	279	R	R
24	Perform loading on the Generator engines using load banks and vibration analysis and stabilize the units and avail detailed reports.	Each	31	R	R
<b>Total Part C: Excluding VAT</b>					<b>R</b>

<b>PART D: Commissioning and Documentation</b>					
<b>Item</b>	<b>Description</b>	<b>UOM</b>	<b>QTY</b>	<b>Rate per Unit</b>	<b>Total Excl. VAT.</b>
1	Provision of as-built drawings and schematics in DWG format and Operating and Maintenance Manuals Technical Handbooks - Hard copy and soft copy in English for all 31 Generators	Sum	31	R	R
2	Original Equipment Manufacturer (OEM) familiarization for Electrical Maintenance staff (26 personnel)	Sum	2	R	R
3	Commissioning of the works performed in section C	Each	31	R	R
<b>SUB-TOTAL Excluding VAT: PART D: Commissioning and Documentation</b>					<b>R</b>

<b>DESCRIPTION</b>	<b>TOTAL</b>
<b>Part A: Preliminary and General</b>	<b>R</b>
<b>Part B: Equipment Supply and Delivery</b>	<b>R</b>
<b>Part C: Installation and Testing</b>	<b>R</b>
<b>Part D: Commissioning and Documentation</b>	<b>R</b>
<b>SUB TOTAL E = (Part A to Part D)</b>	<b>R</b>
<b>Contingency (10% of Sub Total E)</b>	<b>R</b>
<b>Sub Total F = (SubTotal E + Contingency)</b>	<b>R</b>
<b>Vat (15% of Sub-Total F)</b>	<b>R</b>
<b>*Total Tendered Amount (Sub-Total F + Vat) Form of Offer to be carried over to page 2 of this contract.</b>	<b>R</b>

**PART C3: SCOPE OF WORK**

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Works Information</i>	
C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	

**TABLE OF CONTENTS**

<b>Clause number and description</b>	<b>Page</b>
Part 3: Scope of Work .....	44
C3.1: Employer's works Information.....	46
1. Description of the <i>works</i> .....	46
2. 1.1 Existing Equipment Information.....	47
3. 1.2 Scope of Supply/Works/Services .....	47
4. Procurement.....	58
5. Construction.....	59
6. Plant and Materials standards and workmanship.....	62
2. List of drawings .....	64
C3.2 <i>Contractor's Works Information</i> .....	65

### **C3.1: EMPLOYER'S WORKS INFORMATION**

#### **1. Description of the works**

The project comprises of the following:

The scope encompasses the design, manufacture, functional testing, modification of all control wiring on site, installation of engine controllers and electronic governors, commissioning and handover in full working order of existing 31 x backup generators at KSIA for a period of 24 months.

KSIA is equipped with 31 backup generators of varying capacities. Due to aging infrastructure and prolonged exposure to coastal environmental conditions, most outdoor units are exhibiting significant corrosion and structural degradation of fuel tanks. Additionally, coolant system leaks are present across all units, adversely impacting generator reliability and operational availability.

The electronic components of the generator changeover mechanisms have deteriorated due to age, resulting in reduced reliability and frequent manual starts during power failures. Additionally, all generator controllers require replacement, as the existing units are obsolete and no longer supported.

To mitigate fire risks and protect infrastructure, all indoor generators must be fitted with fusible link cut-off valves. This safety requirement was identified by IUM Insurer and mandates ACSA to retrofit all applicable units accordingly. The valves are intended to automatically isolate fuel supply in the event of a fire originating from the generator or its surroundings.

The generators must be arranged to synchronize and run in parallel with one another as well as the Normal Mains supply ensuring a no-break transfer of power in both directions. Peak shaving and Island mode functions are a specific requirement. These functions must be designed to allow for remote monitoring from the ACSA IMC via HMI System.

The existing standby generators must be fully upgraded utilizing the electronic equipment that meets the Specifications. The generators shall be fully automatic, i.e. they shall start when any one phase of the normal main supply fails or is out of pre-set limits and shall shut down when the normal supply is re-established.

The mobile fuel bowser requires replacement due to advanced age and its current non-roadworthy condition. Additionally, the fuel system pumps need replacement to ensure safe and reliable fuel transfer operations.

The contractor shall be responsible for the maintenance of the 31 back generators during the defects free period in line with the Original Equipment Manufacturer's specifications and Employer requirements. The NEC3 Term Service Contract, April 2013 general conditions shall apply.

## 1.1 Existing Equipment Information

### The existing Generator Inventory at KSIA

Location	Code	Generator Size	Engine make	Serial Number	Engine type	Alternator make	Alternator type	Bulk tank capacity	Day / base tank capacity	Max. Tank capacity	Consumption l / hr @ full load
Main Terminal Building	TMB A1	3 x 1250	Perkins	DGKM2038U11179S	4012 TWG 2	Leroy Somer	LL 8124 L	23000	2200	25200	264
			Perkins	DGKM2038U11181S	4012 TWG 2	Leroy Somer	LL 8124 L				264
			Perkins	DGKM2038U11145S	4012 TWG 2	Leroy Somer	LL 8124 L				264
Airside corridor	TMB A2	2 x 500	Volvo	2016085149	TAD 734 GE	Mecc Alte	ECO 38 - 1 LN / 4	2200	900	4000	53,1
			Volvo	2016085143	TAD 734 GE	Mecc Alte	ECO 38 - 1 LN / 4		900		53,1
Multi-storey parkade	MSP P1	500	Volvo	2016035460	TAD 1641 GE	Mecc Alte	ECO 40 - 3 S	4500	1000	5500	107,9
Control Tower	CT 1	2 x 450	Volvo	D16*034967*C3*4	TAD 1642 GE	Mecc Alte	ECO 40 - 2 S / 4	4500	1000	11000	98,9
			Volvo	D16*035459*C3*A	TAD 1642 GE	Mecc Alte	ECO 40 - 2 S / 4	4500	1000		98,9
Airfield sub 1	AS1	800	Perkins	DGDF2005421062S	4006 - 23 TAG 3A	Leroy Somer	LL 7024 P	2 x 4500	1000	10000	163
Airfield sub 2	AS2	150	Volvo	5310637235	TAD 731 GE	Mecc Alte	ECP 34 - 2 L / 4	2200	1000	3200	31,2
Airfield sub 3	AS3	150	Volvo	5310637234	TAD 731 GE	Mecc Alte	ECP 34 - 2 L / 4	2200	1000	3200	31,2
Airfield sub 4	AS4	800	Perkins	DGDF2005421057S	4006 - 23 TAG 3A	Leroy Somer	LL 7024 P	2 x 4500	1000	10000	163
Fuel Farm	FFM	400	Volvo	D12*634889*D1*A	TAD 1242 GE	Mecc Alte	ECO 40 - 1 S	1000	1000	1000	85,1
Passenger apron area 1	MS-A1	135	Perkins	U890764S	2614 / 1500	Leroy Somer	LL 3014 F		616	616	31,2
Passenger apron area 2	MS-A2	135	Perkins	U890888S	2614 / 1500	Leroy Somer	LL 3014 F		616	616	31,2
Passenger apron area 4	MS-A4	135	Perkins	U892306S	2614 / 1500	Leroy Somer	LL 3014 H	616	616	616	31,2
Crash, fire, rescue	CFR	135	Perkins	U883675P	2614 / 1500	Leroy Somer	LL 3014 H		616	616	31,2
Maintenance building 1	MB 1	135	Perkins	U890889S	2614 / 1500	Leroy Somer	LL 3014 F		616	616	31,2
Maintenance building 2	MB 2	135	Perkins	U885521P	2332 / 1800	Leroy Somer	LL 3014 F	616	616	616	31,2
Cargo apron	MS-CA	135	Perkins	U878011P	2332 / 1800	Leroy Somer	LL 3014 F		616	616	31,2
Security gate	MS-SG	135	Perkins	U88558P	2332 / 1800	Leroy Somer	LL 3014 F		616	616	31,2
Forward fuel depot	FFD	135	Perkins	U886181P	2614 / 1500	Leroy Somer	LL 3014 H	300	300	300	31,2
Northwaste treatment plant		250	Volvo	5310782820	TAD 940 GE	Mecc Alte	ECO 38 - 2 LN / 4		1000	3200	53,8
Southwaste treatment plant		250	Volvo	5310782817	TAD 940 GE	Mecc Alte	ECO 38 - 2 LN / 4		1000	3200	3,8
Outside parking		40	Perkins	U166395	1103 A - 33 TG 1	Leroy Somer	LL 2014 B	616	616	616	9,4
Mobile		800	Perkins	DGDF2005422051S	4006 - 23 TAG 3A	Leroy Somer	LL 7024 P		936	936	163
State Protocol		185	Volvo	5310749218	TAD 732 GE	Mecc Alte	ECO 38 - 2 SN		1018	1018	42,4
Car Rental		277	Volvo	D9A2A7009189237	TAD 940 GE	Marelli	MJB 315 SA 4	1000	1000	1000	63,8

## 1.2 Scope of Supply/Works/Services

- 1.2.1 *The Contractor* will be appointed directly by *The Employer*, for the duration of this contract  
*The Employer* is Airports Company South Africa.
- 1.2.2 *The Works Information* which encompasses the design, manufacture, functional testing, modification of all control wiring on site, installation of engine controllers and electronic governors, commissioning and handover in full working order of existing control panels and existing 31 x backup generators with all accessories in line with respective serial numbers for each unit as described in this specification.
- 1.2.3 *The Contractor* is to develop a project schedule, equipment list, cost projections, schematic drawings and produce factory acceptance test certifications after the award.
- 1.2.4 The operating service manual handbook must be submitted by *The Contractor* after commissioning in softcopy and hardcopy in English.
- 1.2.5 The operating manual is to include data sheets for all installed equipment or instruments, drawings package, equipment list, bill of quantities, quality assurance checklist from factory, test certifications, OEM documentation for maintenance, detailed installation report and personal details of personnel involved in installation.
- 1.2.6 *The Project Manager* must sign a delivery note accepting as-built drawings package and operating manual on-behalf of *The Employer*.
- 1.2.7 The space occupied by the existing Generators cannot be changed or expanded.
- 1.2.8 Any damage to goods being delivered during transportation is the responsibility of *The Contractor*.

**1.2.9** Working tools, cleaning consumables and testing equipment is to be supplied by *The Contractor*.

### **1.3 Equipment delivery/Supply**

#### **1.3.1 Standby generators**

The existing engines shall have electronic equipment installed on the existing governors to provide class A0 governing in accordance with BSS.5514. Governor actuators and controllers shall be utilized on each engine to ensure they are capable of delivering the specified output continuously under the site conditions mentioned below, without overheating. The engines shall be capable of delivering an output of 110% of the specified output for one hour in any period of 12 hours consecutive running.

#### **1.3.2 Control board**

The control board shall be fully equipped with controllers for both change-over switchgear and generators. The controllers shall be capable to perform auto load transfer and synchronization; the boards shall be completely rewired.

##### **Generator controller specifications:**

- Built in governor and AVR control
- Comprehensive synchronizing & load sharing capabilities
- Base load (kW export) control
- Positive & negative kVAr export control
- 4-line back-lit LCD text display
- Multiple display languages
- Five-key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- Expansion compatibility
- Data logging & trending facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232, RS485 & Ethernet communication
- Front panel configuration with PIN protection
- Power save mode
- 3-phase generator sensing and protection
- Generator current and power monitoring (kW, kVAr, kVA, pf)
- kW and kVar overload alarms
- Reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection

- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 8 configurable DC outputs
- 2 configurable volt-free relay outputs
- 4 configurable analogue/ digital inputs
- Built in sensors to support 0 V to 10 V & 4 mA to 20 mA
- 12 configurable digital inputs
- Configurable 5 stage dummy load

**Mains power monitor/controller Specifications:**

- Mains (utility) failure detection
- Mains (utility) power monitoring (kW, kVAr, kVA and pf)
- Peak lopping and shaving functionality
- Mains (utility) kW export protection
- Comprehensive synchronizing and load sharing capabilities
- Base load (kW export functionality)
- Positive & negative kVAr export control
- Mains (utility) decoupling protection
- Mains (utility) and bus positive, negative and zero sequence voltage alarms
- Mains (utility) and bus neutral voltage displacement (NVD) alarms

The CanBus screened communication cable between controllers shall be used for communication purposes between the controllers. The control panel doors shall be replaced with new sheet metal doors that match the existing board colours. All labels and accessories shall be replaced with suitably engraved Traffolyte labels.

**Communication cable characteristics/specification (CanBus)**

- Flame retardant according to IEC 60332-1-2 or IEC 60332-2-3-24
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas) and Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity).
- Flexible up to -30°C Shielded versions
- The cable shall be shielded from EMI critical environment (electromagnetic interference)
- The cable shall be shielded to ensure high coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz).

**Generator Control and Switching:**

This section will contain all equipment relevant to the automatic control switching and monitoring of the diesel engine and generator that it controls.

A suitable generator controller with Ethernet interface and it must be interfaced with HMI which must be provided with the following metering facilities:

**Instrumentation**

- Generator Volts L1-N, L2-N, L3-N
- Generator Volts L1-L2, L2-L3, L3-L1
- Generator Amps L1, L2, L3
- Generator Frequency Hz
- Generator kVA L1, L2, L3, Total
- Generator kW L1, L2, L3, Total
- Generator pf L1, L2, L3, Average
- Generator kVAr L1, L2, L3, Total
- Generator kWh
- Generator kVAh
- Generator VArh
- Generator Phase Sequence
- Synchroscope Display
- Engine Speed RPM
- Engine Oil Pressure
- Engine Temperature
- Plant Battery Volts
- Engine Hours Run
- Fuel levels
- Number of Start Attempts
- Maintenance Display
- Engine ECU diagnostics information via industry standard CAN interface
- Enhanced metering via CAN when connected to an electronic engine

### **Control selectors and LCD Display**

The module is operated using the front STOP/RESET, MANUAL, AUTO and START push buttons. Three of these push buttons include an LED indicator. Additional push buttons provide LCD display scroll, lamp test, mute functionality and breaker control.

- Electronic engine communication capability (J1939)
- ModBus RS485 remote communication facility
- Back-lit LCD 4-line text display
- Voltage measurement
- Configurable inputs (12)
- Configurable outputs (8)
- Automatic start
- Manual start
- Audible alarm
- LED indicators
- Built-in governor and AVR control outputs
- Engine history event log
- Engine protection
- Bus failure detection
- Configurable alarm timers
- Configurable start & stop timers
- Automatic load transfer

### **Control Functions and Equipment**

The module must be able to monitor under/over generator volts, over current, under/over generator frequency, under speed, over speed, charge fail, emergency stop, low oil pressure high engine temperature, fail to start, low/high DC battery volts, fail to stop, generator short circuit protection.

- ROCOF & vector shift
- Automatic starting & stopping of generator on load demand
- Automatic hours run balancing of generator sets
- Dead bus sensing
- Automatic synchronizing facility

- Island mode facility
- Peak lopping facility
- Direct communication from the module to the governor and AVR
- Volts & frequency matching
- kW and kVAr load sharing with multiple generators

### **Mimic**

A single line diagram mimic shall be provided on each controller, indicating the status of each power device that is controlled by the system.

### **Testing**

Prior to testing with the generating sets, the switchboard must be fully tested on a simulator and shall simulate the following control conditions.

- Automatic Starting and Stopping of the Generators.
- Automatic Frequency Balancing.
- Automatic Synchronising.
- Automatic Active Load Sharing.
- Automatic Reactive Load Sharing.
- Manual Control of the Generators.

## **MAINTENANCE**

The successful tenderer shall be required to maintain the plant in good running condition to the approval of the Engineer for a period of 12 months after the plant has been taken over by the Client.

### **Human Machine Interface (HMI) System**

The HMI system shall be compatible with Deep Sea Electronics (DSE) controller, and fully capable of displaying metering facilities from the DSE controller through the PLC. The PLC must have digital inputs, outputs and element signal and must be able to take signals from 31 generators in different locations. The HMI must display the following:

- Generator Volts L1-N, L2-N, L3-N
- Generator Volts L1-L2, L2-L3, L3-L1
- Generator Amps L1, L2, L3
- Generator Frequency Hz
- Generator kVA L1, L2, L3, Total
- Generator kW L1, L2, L3, Total
- Generator pf L1, L2, L3, Average
- Generator kVAr L1, L2, L3, Total
- Generator kWh
- Generator kVAh
- Generator VArh
- Generator Phase Sequence
- Synchroscope Display
- Engine Speed RPM
- Engine Oil Pressure
- Engine Temperature
- Plant Battery Volts
- Engine Hours Run
- Fuel levels
- Number of Start Attempts
- Maintenance Display
- Engine ECU diagnostics information via industry standard CAN interface
- Enhanced metering via CAN when connected to an electronic engine

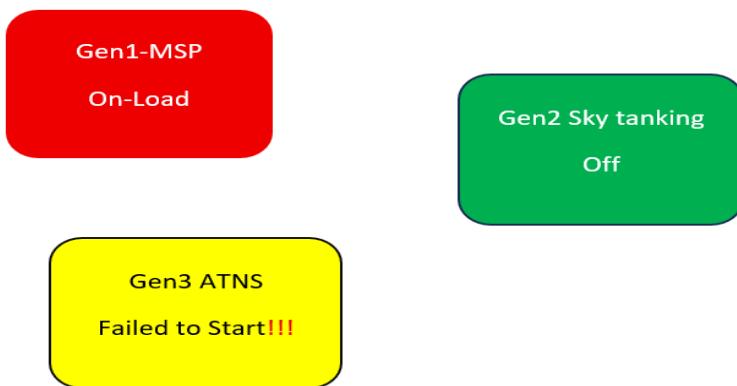
The Structured Query Language (SQL) database shall be opensource, reliable and robust. The system shall handle all known Alarm Receiver formats and have built in TCP/IP capability and can therefore communicate across LANS, WANS, or the Internet.

The HMI system shall incorporate multiple independent monitoring codes, each with the facility to link to different decoding categories. Zone descriptions shall be maintained independently of the equipment in use on the premises.

The system shall facilitate the monitoring of multiple reporting devise for each client with a periodic test function which caters for independent NO TEST report tracking on each device.

The 55" Smart screen shall be capable of Implementing a mimic panel to visualize the status and parameters of 31 generator units. The mimic panel shall utilize color-coded status indicators for generator sets (gensets) as follows:

- Red: Genset is in Running state.
- Green: Genset is in Rest/Standby state.
- Yellow: Genset has Failed to Start.



#### **Remote access, Maintenance and Support (RMS) service**

There shall be 24/7 support available

Remote access and remote-control computer software with the client's permission to access the server or Personal Computer (PC) to identify and if necessary, fix a problem, or assist.

#### **Personal Computer (PC) Specifications**

Genuine motherboards to be used with sufficient Peripheral Component Interconnect (PCI) or Peripheral Component Interconnect Express (PCI-e) slots to accommodate additional serial cards (RS232 ports for base, receiver or modem connections).

A minimum of an i5 Central Processing Unit (CPU) is recommended.

A minimum of 256 Gb Solid State Drive (SSD). A secondary hard drive is recommended for backup purposes.

RS232 ports to be installed into the PC. Each base station or receiver requires its own RS232 port. Do not use USB to RS232 converters to link input units.

A minimum of 8 Gb Random-Access Memory (RAM).

The operating system shall be Windows 11

#### **DIESEL BOWSER TANKER TRAILER**

Feature	Specification
Tank Capacity	1000 Liters
Tank Shape	Oval
Tank Material	Stainless Steel
Chassis Heavy	Duty Welded Frame
Axle Type	Double
Braking System	Mechanical

Road Registration	Fully registered including Airside Permit
Add-ons	Pump, Hose Reel, Meter, Toolbox, Fire Extinguisher
Compatibility	Diesel
	Braked Axle 0.75t coupler no brake Jockey wheel 55 round Single wheel Flicker
	Brake, Park lamp and licence light X 2 yellow tape all round with reflectors
	Spare wheel attached 13" Wheel on trailer
	Required SANS signage for diesel
	12 V 45 LPM, DIESEL PUMP and FILTER

#### 1.4 STANDARDS AND CODES

No	Code No.	Title
1	OHS Act	Occupational health and Safety Act and Regulations (85 of 1993).
2	SANS 10142: Part 1 & Part 2	Wiring codes: Low Voltage Installations & Medium Voltage fixed installations.
3	SANS/IEC 60439	low-voltage switchgear and control gear assemblies

#### 1.5 GENERAL CONSTRUCTIONAL FEATURES

**1.5.1** All material used shall be of best quality and of the class most suitable for working under the conditions specified and shall withstand the variations of temperature and atmospheric conditions, overloads, over excitation, short circuits as per specified standards, without distortion or deterioration or the setting-up of undue stresses in any part and also without affecting the strength and suitability of the various parts of the work which they have to perform.

#### 1.6 INSPECTION AND TESTING

**1.6.1** The equipment covered by this Contract shall be subjected to inspection and testing. The Contractor shall provide all services to establish and maintain quality of workmanship in his works and that of his Subcontractors to ensure the mechanical/electrical performance of components, compliance with drawings, identification and acceptability of all materials, parts, and equipment.

**1.6.2** On award of the Contract, The Contractor shall prepare Quality Control Plan identifying the various stages of manufacture, quality checks performed at each stage and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards/values and get the approval of The Employer or his representative before proceeding with manufacturing. However, The Employer or his representative shall have the right to review the inspection reports, quality checks and results of the manufacturer's in-house inspection department which are not Customer hold points, and The

Contractor shall comply with the remarks made by The Employer or his representative on such reviews with regards to further testing, rectification, or rejection etc.

- 1.6.3** The Contractor shall perform his internal inspection/testing before offering the equipment for The Employer's inspection. Only after ensuring that his inspection/test results are satisfactory, The Contractor shall offer the equipment for The Employer's inspection. However, this clause is not applicable in case of such tests which remained to be done only once in the lifetime of the equipment.
- 1.6.4** The minimum inspection requirements for all components/equipment shall conform to the design and fabrication requirements as defined in the Codes and Standards referred to in The Works Information document. The type of inspection shall be as prescribed in Quality Control plan and as agreed upon by The Contractor, and shall include, if applicable, inspection procedures prescribed by Codes and Regulations recognized by the governmental authority having jurisdiction over the installed goods.
- 1.6.5** Wherever required, getting approval of Government bodies under jurisdiction is the sole responsibility of The Contractor for his design, drawings, manufacturing, testing, and inspection by such bodies. In such cases approval by Government bodies under jurisdiction will not relieve The Contractor from his responsibility of making good of defective material or equipment or system. However, The Contractor shall keep The Employer/his representatives informed in writing of any approval or otherwise any comments of such Government bodies. The Contractor shall take the concurrence of The Employer or his representative before proceeding with rectification procedures as called by the Government bodies.
- 1.6.6** Approval or passing of any such inspection by The Employer or his authorized representative shall not, however, prejudice the right of The Employer to reject the equipment if it does not comply with the Specification when erected or give complete satisfaction in service.
- 1.6.7** The Contractor shall intimate to *The Employer* of any material being ready for testing. Such tests shall be to The Contractor's account except for The Employer's expenses. The Employer or his representative, unless the inspection of the tests is virtually waived, shall attend such tests within a reasonable period of the date on which the equipment is notified as being ready for test/inspection failing which, The Contractor may proceed with the tests which shall be deemed to have been made in the Employer's presence and The Contractor shall forward the duly certified copies of tests along with observation readings to The Employer in triplicate.
- 1.6.8** The Employer shall give notice in writing to The Contractor of any objection to any drawings and, all or any equipment and workmanship which in his opinion is not in accordance with the 'Contract'. The Contractor shall give due consideration to such objections and shall either make the modifications that may be necessary to meet the said objections or shall confirm in writing to The Employer giving reasons therein that no modifications are necessary to comply with the 'Contract'. However, The Employer has the final authority to accept or reject The Contractor's views. The equipment/material after rectification by The Contractor shall be

offered to The Employer for his final inspection and acceptance without any additional cost to The Employer.

- 1.6.9** When the factory tests have been completed at The Contractor's or his Sub Contractor's Works to the satisfaction of The Employer, The Employer shall issue a certificate to this effect within fifteen (15) days after completion of tests, but if the tests are not witnessed by The Employer's representative, the certificate shall be issued within fifteen (15) days of the receipt of The Contractor's test certificate by The Employer provided the test results are satisfactory and conform to the specified parameters. Failure of The Employer to issue such certificate shall not prevent The Contractor from proceeding with the subsequent work. The completion of these tests or the issue of the certificate shall not bind The Employer to accept the equipment should it, on further tests after erection, be found not to comply with the 'Contract'.
- 1.6.10** In all cases where the 'Contract' provides for tests whether at the premises or Works of The Contractor or of any Sub-Contractor, The Contractor, except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by The Employer or his authorized representative to carry out effectively, such tests of the equipment in accordance with the 'Contract' and shall give facilities to The Employer or to his authorized representative to accomplish testing.
- 1.6.11** The inspection by The Employer and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of The Contractor in respect of agreed quality assurance programme forming a part of the 'Contract'.
- 1.6.12** In the case of stage inspection, The Contractor shall proceed from one stage to another only after the component is inspected by The Employer or his representative and permission given to proceed further. The same procedure shall be adopted for any rectification /repairs suggested by The Contractor or his representative.
- 1.6.13** At all Customer hold points The Contractor shall compulsorily offer for inspection to The Employer and, if any waiver by The Contractor shall be obtained in writing for record purposes.
- 1.6.14** None of the equipment to be furnished or used in connection with the Contract shall be dispatched until shop inspection, satisfactory to The Employer or his representative has been made and specific Dispatch Instructions for the equipment is issued by The Contractor. However, such shop inspection shall not relieve The Contractor of his responsibility for furnishing the equipment conforming to the requirement of the Contract nor prejudice any claim, right or privilege which The Employer or his representative may have because of the use of defective or unsatisfactory items of the equipment. Should The Employer or his representative waive the right to inspect any item of the equipment, such waiver shall not relieve The Contractor in any way from his obligation under the Contract. In the event of The Employer on inspection revealing poor quality of goods, The Employer or his representative shall be at liberty to specify additional inspection procedures, if required, to ascertain The Contractor's compliance with the equipment Specifications.

**1.6.15** All principal mill test reports, test certificates and test curves shall be supplied for all tests carried out including other records such as stress relieving charts, radiographic charts and other non-destructive testing records in accordance with the provisions of the Contract. The Employer or his representative shall reserve the right to call for certificates of origin and test certificates for all raw material and equipment at any stage of manufacture.

## **1.7 SUB-ORDERS**

- 1.7.1** To ensure getting good quality product from Subcontractor, the main Contractor shall get the approval of The Employer by furnishing details of capability, experience, manpower, manufacturing facility, quality control facilities etc. of the Subcontractor before placement of order. The Employer may visit the Subcontractor 's works to evaluate their capacity and capability to do quality job to meet specification requirements. The sub- orders should highlight the inspection and quality control requirements stipulated in the main Works Information and all required quality checks and tests shall be conducted as per the Works Information.
- 1.7.2** To facilitate the inspection of bought-out materials and equipment, The Contractor shall submit for approval, three (3) copies of all sub-orders placed by him as soon as they are issued. Copies of any drawings referred to in the sub-order shall also be submitted, unless otherwise agreed by The Employer or his representative.
- 1.7.3** The sub-orders and drawings referred to above shall cover all components which are subjected to electrical and mechanical pressure or stress when the plant is in operation, and auxiliaries and spares which are to be directly dispatched to Site from the Subcontractor's Works.
- 1.7.4** All sub-orders shall clearly be marked with the main Contractor's name and The Employer's reference. They shall include a statement advising the Subcontractor that items being ordered will also be subject to inspection and test by The Employer or his representative.
- 1.7.5** It is important that all copies of sub-orders be clearly marked with the main Contractor's name and the name of The Employer and 'Contract' reference.
- 1.7.6** The Sub-Contractors are to comply with all the applicable requirements of this Works Information and with this Section. Orders issued by the Subcontractors are also to include the main Contractor's name on their sub-order in addition to the above-mentioned heading.

## **1.8 MATERIAL TESTS**

- 1.8.1** In the event of The Employer or his representative being supplied with the particulars of tests which have been carried out for The Contractor by the suppliers of material, he may, at his own discretion, accept the same as proper evidence of compliance with the requirements of appropriate specifications for the materials.
- 1.8.2** In case the correlating test certificates are not available, The Contractor, at no extra cost to The Employer will get all the tests done to establish conformity of the material to its relevant code or specification.

## 1.9 TESTS AT MANUFACTURER'S WORKS

**1.9.1** The tests at Works shall include electrical, mechanical and hydraulic tests in accordance with the appropriate clauses of Statutory Regulation, relevant Codes and Standards and in addition any test called for by The Employer or his representative to ensure that the equipment being supplied fulfils the requirements of the Works Information. The Contractor shall carry out all the shop tests and inspections specified in the following clauses in addition to those normally carried out by him/her. For equipment not covered by any code or specifically mentioned in this Works Information, the tests are to be agreed with The Employer. If considered necessary by The Employer or his representative, multipart assemblies shall be fully erected and tested in the works prior to packing and dispatch to the site.

## 1.10 TEST CERTIFICATES

**1.10.1** All routine and type test certificates including test records, performance curves, etc. shall be supplied according to the distribution schedule. All the tests shall be carried out in accordance with the provisions of this contract.

## 1.11 COMMISSIONING OF THE WORKS

**1.11.1** When installation stage is complete, The Contractor must submit operating manual to The Employer and as-built drawings within 7 days. An appointment date for commissioning must be arranged by The Contractor with 2 weeks after submitting operating manual and as-built drawings.

**1.11.2** A checklist page prepared by The Contractor is to be used to tick each step of commissioning process by stakeholders and The Employer can issue a snag list to *The Contractor* after this process, of which The Contractor must fix within a period agreed between two parties. No payments are to be made by The Employer until all snags are completed, and snag list signed off by The Project Manager.

**1.11.3** The Contractor must submit test certificates to The Employer within two weeks after commissioning. The Employer is to pay maximum 75% the contract value before commissioning, as per cost projections and actual work completed in stages of the project. However, the remaining 25% will be paid to The Contractor 30 days after successful commissioning date and completion of snags (i.e., provided no faults occur in before 30 days is depleted).

## 1.12 QUALITY CONTROL AND REPORTING

**1.12.1** The Contractor shall provide monthly reports and control documents in accordance with the contractors ISO 9001 certification, to manage the report process and action all aspects of the project programme.

- 1.12.2** The Contractor shall report to The Employer monthly with a monthly report. The updated documents and the issues raised from the reports will be fully discussed and raised to The Employer regarding the contract.
- 1.12.3** Compulsory project meeting is to take place every month until commissioning stage and at least three representatives from The Contractor must be present for both project progress meeting and risk meetings every month. QCP (Quality Control Plan) documentation must be submitted by The Contractor to The Employer before installation (i.e., from OEM) and after installation (i.e., by Contractor).

### **1.13 TRAINING**

- 1.13.1** The Contractor shall provide necessary equipment training to The Employer's electrical maintenance personnel after commissioning.

### **1.14 EXTENT OF THE WORKS**

- 1.14.1** The Contractor will be fully responsible for meeting all requirements in this document regarding the works. In addition, all works will be carried out to the standard and compliance as required by the Original Equipment Manufacturer (OEM) and Maintenance and Engineering working procedures, as well as any applicable governing law and/or regulations.
- 1.14.2** Upon arrival at Employer's premises at the pre-arranged time, the Contractor shall report to the Employer's representative and Project Manager to conduct pre-inspection. When work is complete for the day, the contractor is to report to Project Manager and post-inspection of the works is to be conducted.
- 1.14.3** It should be noted that the amounts for access permits and training will be at the contractor's cost, and The Employer will reimburse the contractor.
- 1.14.4** The Contractor should, always stock any replacement parts necessary for the execution of the works. The Employer will arrange a storage area on site when required. The principle that applies to stockkeeping is that delays on the project programme due to parts and spares should be kept to a minimum. Therefore, all consumables that might be necessary for the execution of the works shall be made readily available by the contractor.

## **2. Contract Management**

### Management meetings

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

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

Title and purpose	Approximate time &	Location	Attendance by:
Project progress meeting and safety inspections	Weekly	King Shaka International Airport	<i>Contractor, Supervisor and Employer's safety officers</i>
Overall contract progress and feedback	Monthly	King Shaka International Airport	<i>Project Manager Contractor, Supervisor and Employer's safety officers</i>

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

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

#### Health and safety risk management

- The contractor shall have a toolbox meeting stating all the health and safety related issues and must be documented as such before any work can start.
- The Contractor shall comply with the health and safety requirements contained Part C1.4 to this Works Information.
- The contractor shall ensure that all personnel performing work have correct PPE.

#### Environmental constraints and management

The contractor to ensure that the design and his associated activities (installation, disposal of waste, noise, pollution etc.) complies with ACSA environmental policy. The contractor is required to report monthly on any environmental issues that affect the project or affected by project.

#### Quality assurance requirements

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.

#### Programming

The program is as per Tender submission. The first revised program shall be submitted within two weeks after the start date.

The *Contractor's* Personnel

As per Tender submission

Insurance cover provided by the *Employer*.

As per Part C1.5

Provision of bonds and guarantees.

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

Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*. The records should be filed by the contractor as hard copies and share with Project Manager on soft copy (emailed) without limitation to the Employer's rights under the *Contractor*.

Training workshops and technology transfer

The contractor shall be responsible for conducting an on-site training (or off-site training should the Contractor be in position of a training facility) on the maintenance, inspection, and maintenance features of the Dry-type Transformers to the ACSA maintenance team (ACSA maintenance staff and contractor employed by ACSA for the maintenance of medium voltage system. The training should aim at aiding the maintenance team to be able to independently conduct routine general Dry-type transformers safety inspection, set up the transformer at different tap changer depending on the requirement. The maintenance team will comprise of twenty-six (26) personnel.

### **3. Engineering and design of the works**

*Employer's* design

The Employers' design is limited to the following:

Layout of the existing buildings and equipment

Parts of the works which the *Contractor* is to design<sup>1</sup>

The Contractor is responsible for the detail design of the following:

- See C3.2 below.

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.

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.

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.

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**

Personnel:

Minimum requirements of people employed on the Site.

No Minimum requirements of people employed on the Site.

Subcontracting

Preferred subcontractors

No preferred subcontractor or supplier by Employer.

Limitations on subcontracting

The main contractor will be responsible for the subcontractor and must ensure that he complies to ACSA regulations and always have the correct PPE and comply to ACSA health and safety requirements.

Plant and Materials

Plant & Materials provided "free issue" by the *Employer*

Plant & Material storage and safeguard is the responsibility of the contractor. The contractor to clearly state the lead times on Contractor's procurement of plant and materials.

*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 owned suppliers

Tests and inspections before delivery

Factory Assessment Testing (FAT) shall be done between the OEM and the Contractor representing the employer. The Project Manager shall form part of the tests and be provided with testing schedule. A proof of Factory testing will be required prior the delivery of material.

Marking Plant and Materials outside the Working Areas

The contractor needs to state how the material will be marked once the deposit amount is paid. The contractor to indicate how the guarantee of the material delivery will be ensured once the deposit is paid upfront.

*Contractor's Equipment (including temporary works)*

Contractor equipment and material to be safely secured at all times especially when not used on the airside.

## 5. Construction

Temporary works, Site services & construction constraints

Site establishment and equipment to be based on the airside. It will be a contractor's responsibility to provide a secure environment for their equipment. The contractor's personnel will be restricted to the contractors own established site and the agreed area of work. The contractor's personnel will not be permitted at the Airside/restricted areas without the necessary reflective jackets.

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

An induction course must be attended by the contractor and all personnel who would be involved on site. The contractor to make his own arrangement for staff full medicals and schedule with the ACSA's project manager for the induction course. Security arrangements would be discussed at the induction meeting and should be strictly adhered to. It should be noted that ACSA premises complies to National Key Point Regulations, every person who conduct work at the airport will be subjected to security vetting. ACSA will not be held liable should one of the contractor members fail SAPS vetting process.

The Contractor shall procure the services at King Shaka International Airport. All airside services are in restricted areas and access-controlled areas; accordingly, it is crucial for the

Contractor to note that King Shaka International Airport is a National Key Point and governed as such.

- (b) The Contractor shall be compensated for costs relating to Employer required permits.
- (c) 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).
- (d) 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.
- (e) The following table is not all inclusive, but is provided for illustration purposes:

<b>Permit</b>	<b>Required by/for</b>	<b>Department</b>
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

- (f) 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.

- (g) 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.

- (h) 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.

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 provide and maintain sufficient signs, lights, barriers, fencing and guarding as may be necessary or required.

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 there-on when entering the premise as form of identification. Permits to be always displayed whilst on site.

Work will be conducted as a combination of day and night work to minimize the impact on operations. Work program to be submitted with the tender to ensure the manoeuvring area is clear of aircraft movements prior and during construction work.

Title to materials from demolition and excavation

Not applicable

*Contractor's Equipment*

Contractor to keep record of equipment on site, service history etc. and keep a copy on site.

Site services and facilities provided by the *Employer*

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

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.

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.

Site conditions and requirements

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.

Completion, testing, commissioning, and correction of Defects

Work to be done by the Completion Date

All work is to be done by the Contractor shall be completed by the Completion Date, save for the following: list project-specific exceptions and state by when the work should be completed.

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

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

Materials facilities and samples for tests and inspections

The contractor to present the product sample to the *Project Manager* prior the installation and submit the relevant factory test certificates.

Commissioning

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

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.

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.

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. Performance tests after Completion

Performance tests after Completion

Contractor to ensure all necessary tests and calibrations are conducted and submit all reports to the *Employer*.

Operational maintenance after Completion Maintenance manuals and training will be provided by the contractor on completion of works.

## 6. Plant and Materials standards and workmanship

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.

Building works

Product specification and installation standard to be compliant with the standard stated above in the Scope of Works

Civil engineering and structural works

As per Scope of Work

Electrical & mechanical engineering works

As per Scope of Work

## 7. List of drawings

1.1. Drawings issued by the *Employer*. – **NOT APPLICABLE**

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

**PART C4: SITE INFORMATION****C3.2 CONTRACTOR'S WORKS INFORMATION**

Description of works

Document reference	Title	No of pages
	This cover page Site Information	
Total number of pages		

Core clause 11.2(16) states

"Site Information is information which describes the Site and its surroundings and is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

## Description of the Site and its surroundings

### General description

The work will be carried out at King Shaka International Airport Airside and Landside.

### Existing buildings, structures, and plant & machinery on the Site



Figure 1: King Shaka International Airport Satellite Photo

### Other reports and publicly available information

KSIA is a national key point, and the contractor must read the national key point ACT to familiarise themselves with the regulations.