

**ANNEXURE B**

**AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED**

**PROJECT NUMBER:**

**TITLE OF PROJECT: PROFESSIONAL SERVICES REQUEST FOR PROPOSAL TO DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.**

**NEC 3: PROFESSIONAL SERVICES CONTRACT (PSC)**

**Between AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED**

**Applicable at all ACSA Airports: O.R. Tambo International Airport, Cape Town International Airport, King Shaka International Airport, Bram Fischer International Airport, Chief Dawid Stuurman International, Upington Airport, King Phalo Airport, George Airport, Kimberly Airport**

(Registration Number: 1993/004149/30)

**and [CONSULTANT NAME\_\_\_\_\_]**

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

**for TITLE OF PROJECT:DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.**

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## 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 **PROFESSIONAL SERVICES TO DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.**

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.

The tenderer, identified in the Offer signature block, has examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

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 **Consultant** 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 **Consultant** in the *conditions of contract* identified in the Contract Data.

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 agreed period of validity, or other period as agreed, whereupon the tenderer becomes the party named as the **Consultant** in the conditions of contract identified in the Contract Data.



Signature(s) \_\_\_\_\_

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**For the tenderer:** \_\_\_\_\_

\_\_\_\_\_

*(Insert name and address of organisation)*

Name & signature of witness \_\_\_\_\_

Date \_\_\_\_\_

## 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 **Consultant** 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.

Deviations from and amendments to the draft contract 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 **Consultant**) 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.

Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to-counter delivery / counter-to-counter delivery / door-to-counter delivery / door-to-door delivery / courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now **Consultant**) within seven working days of the date of such submission 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

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Part C1: Agreement and Contract Data

Form of Offer and Acceptance

Reference no . . . . .



**for the  
Employer**

Airports Company South Africa (ACSA) SOC,  
Western Precinct, Aviation Park, OR Tambo International Airport  
1 Jones Road  
Kempton Park  
1632

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

Name &  
signature of  
witness

Date

.....

## Schedule of Deviations

1 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
.....	.....
2 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
.....	.....
3 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
.....	.....
4 Subject .....	.....
Details .....	.....
.....	.....
.....	.....
.....	.....
5 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.

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 the draft contract, 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.

Signature(s)

Name(s) .....

Capacity .....

**for the  
Employer**

*(Insert name and address of organisation)*

Name &  
signature of  
witness .....

Date



## Part C1.2 Contract Data

The conditions of contract are selected from the NEC3 Professional Services Contract, April 2013.

Each item of data given below is cross-referenced to the clause in the NEC3 Professional Services Contract which requires it.

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

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#### 1 General

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The *conditions of contract* are the core clauses and the clauses for main Option:

**A: Priced contract with activity schedule**

Dispute resolution Option **W1: Dispute resolution procedure**  
and secondary Options

**X5: Sectional Completion**

**X7: Delay damages**

**X8: Collateral warranty agreements**

**X10 Employer's Agent**

**X11: Termination by the *Employer***

**X13: Performance Bond**

**X18: Limitation of liability**

**X20 : Key performance indicators**

**Z: Additional conditions of contract**

of the NEC3 Professional Services Contract, April 2013.

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The *Employer* is (Name): **AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED**

Address: Western Precinct, Aviation Park, OR Tambo International Airport  
1 Jones Road  
Kempton Park  
1632

10.1

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Tel No:

Fax No: N/A

Email:

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C1.2

Part C1: Agreements and Contract Data

Contract

Data: Part 1

Reference no .....

- 11.2(9) The *services*  
**TO DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.**

**Refer to Part C3 for detailed Scope of Work.**

11.2(10)	The following matters will be included in the Risk Register
	<ul style="list-style-type: none"> <li>• Unavailability of electrical drawings</li> <li>• Accuracy of the electrical drawings</li> <li>• Access to Site (approvals and permits, police clearance required)</li> <li>• Working in a live airport environment</li> </ul>
11.2(11)	The Scope is in the document called Part 3: Scope of Work
12.2	The <i>law of the contract</i> is the law of the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.
13.1	The <i>language of this contract</i> is English
13.3	The <i>period for reply</i> is two (2) weeks
13.6	The <i>period for retention</i> is 10 years following Completion or earlier termination.

## **2 The Parties' main responsibilities**

25.2	The <i>Employer</i> provides access to the following persons, places and things		
		<b>access to</b>	<b>access date</b>
	<b>1</b>	Any information related to the scope of work	Upon award of the project or signing of the contract by ACSA
	<b>2</b>	Utility bills and energy consumption data	Upon award of the project and during the contract period
	<b>3</b>	All necessary areas that the consultant needs to gain access to in order to perform the services required	During the contract period as and when required
	<b>4</b>	Relevant Engineering, Operational and Maintenance Personnel of ACSA	Upon award of the project and during the contract period

## **3 Time**

31.2	The <i>starting date</i> is Upon signing of the contract by the Employer (ACSA).
11.2(3)	The <i>completion date</i> for the whole of the <i>services</i> is three years (03) years from the start date.

11.2(6) The *key dates* and the *conditions* to be met are:

	<b>Condition to be met</b>	<b>key date</b>
1	Simulation Software Licence	3 months after signing of the contract by ACSA
2	Simulation Software Training	3 months after signing of the contract by ACSA
3	Completion of Upington Airport scope of work	2 months after signing of the contract by ACSA
4	Completion of Bram Fischer International Airport scope of work	3 months after signing of the contract by ACSA
5	Completion of OR Tambo International Airport scope of work	10 months after signing of the contract by ACSA
6	Completion of Cape Town International Airport scope of work	10 months after signing of the contract by ACSA
7	Completion of King Shaka International Airport scope of work	10 months after signing of the contract by ACSA
8	Completion of George Airport Scope of work	3 months after signing of the contract by ACSA
9	Completion of Chief Dawid Stuurman International Airport scope of work	12 months after signing of the contract by ACSA
10	Completion of Kimberly Airport Scope of work	3 months after signing of the contract by ACSA
11	Completion of King Phalo Airport Scope of work	12 months after signing of the contract by ACSA
12	Project closure and Handover	12 months after signing of the contract by ACSA

31.1 The *Consultant* is to submit a first programme for acceptance within 2 weeks of the Contract Date.

32.2 The *Consultant* submits revised programmes at intervals no longer than 4 weeks.

#### **4 Quality**

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Part C1: Agreements and Contract Data  
Data: Part 1

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Reference no .....

40.2	The quality policy statement and quality plan are provided within 2 weeks of the Contract Date.
41.1	The <i>defects date</i> is 52 weeks after Completion of the whole of the <i>services</i> .
<b>5</b>	<b>Payment</b>
50.1	The <i>assessment interval</i> is Every four (4) weeks, on the 25th day of each successive month.
51.1	The period within which payments are made is 30 days in arrears calculated from the invoice date or invoice submission date where the submission is made after invoice date.
51.2	The <i>currency of this contract</i> is the <b>South African Rand</b> .
51.5	The <i>interest rate</i> is the prime lending rate of the Nedbank Bank as determined from time to time
<b>6</b>	<b>Compensation events</b>
	No data required for this section of the <i>conditions of contract</i> .
<b>7</b>	<b>Rights to material</b>
	No data required for this section of the <i>conditions of contract</i> .
<b>8</b>	<b>Indemnity, insurance, and liability</b>
	Refer to part C1.4: ACSA Insurance Clauses
<b>9</b>	<b>Termination</b>
	No data required for this section of the <i>conditions of contract</i> .
<b>10</b>	Data for main Option clause
<b>A</b>	<b>Priced contract with activity schedule</b>
21.3	The <i>Consultant</i> prepares forecasts of the total of the <i>expenses</i> at intervals of no longer than 4 weeks.
<b>11</b>	<b>Data for Option W1</b>

W1.1

### Panel of Adjudicators

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

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:ryneke@duma.nokwe.co.za">ryneke@duma.nokwe.co.za</a>
Mr. Emeka Ogbugo (Quantity Surveyor)	Pretoria	+27 12 349 2027 <a href="mailto:emeka@gosiame.co.za">emeka@gosiame.co.za</a>

W1.2(3) The *adjudicator nominating body* is the current Chairman of Johannesburg Advocate's Bar Council

W1.4(2) The *tribunal* is arbitration

W1.4(5) The *arbitration procedure* is set out in The Rules for the Conduct of Arbitrations 2013 Edition, 7th Edition, published by The Association of Arbitrators, (Southern Africa) or the latest Rules of the Arbitration

The place where arbitration is to be held is Johannesburg, South Africa

The person or organisation who will choose an arbitrator  
if the Parties cannot agree a choice or  
if the *arbitration procedure* does not state who selects an arbitrator,  
is the Chairman of the Association of Arbitrators (Southern Africa)

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**12 Data for secondary Option clauses**

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**X5 Sectional Completion**

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X5.1 The *completion date* for each *section* of the *services* is:

<i>section</i>	<i>description</i>	<i>completion date</i>
1	Simulation Software Licence	3 months after signing of the contract by ACSA
2	Simulation Software Training	3 months after signing of the contract by ACSA
3	Completion of Upington Airport scope of work	2 months after signing of the contract by ACSA
4	Completion of Bram Fischer International Airport scope of work	3 months after signing of the contract by ACSA
5	Completion of OR Tambo International Airport scope of work	10 months after signing of the contract by ACSA
6	Completion of Cape Town International Airport scope of work	10 months after signing of the contract by ACSA
7	Completion of King Shaka International Airport scope of work	10 months after signing of the contract by ACSA
8	Completion of George Airport Scope of work	3 months after signing of the contract by ACSA



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9	Completion of Chief Dawid Stuurman International Airport scope of work	12 months after signing of the contract by ACSA
10	Completion of Kimberly Airport Scope of work	3 months after signing of the contract by ACSA
11	Completion of King Phalo Airport Scope of work	12 months after signing of the contract by ACSA
12	Project closure and Handover	12 months after signing of the contract by ACSA

### X5 and X7 Sectional Completion and delay damages used together

X7.1 Delay damages for late Completion of each *section* of the *services* are:  
X5.1

<i>section</i>	<i>description</i>	<i>amount per day</i>
1	Completion of Upington Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
2	Completion of OR Tambo International Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
3	Completion of Cape Town International Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
4	Completion of King Shaka International Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
5	Completion of George Airport Scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value

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SOUTH AFRICA

6	Completion of Bram Fischer International Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
7	Completion of Chief Dawid Stuurman International Airport scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
8	Completion of Kimberly Airport Scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
9	Completion of King Phalo Airport Scope of work	Amount per day is 0.05% up to the maximum of 10% of the total contract value
10	Project closure and Handover	Amount per day is 0.05% up to the maximum of 10% of the total contract value
Remainder of the services		
<b>X7</b>	<b>Delay damages</b>	
X7.1	Delay damages for late Completion of the whole of the services are <b>0.05% per day up to the maximum of 10% of the total contract value.</b>	
<b>X8</b>	<b>Collateral warranty agreements</b>	
X8.1	The collateral warranty agreements are:	
	<b>agreement reference</b>	<b>third party</b>
<b>X10</b>	<b>The Employer's Agent</b>	
X10.1	The Employer's Agent is	
	Name: <b>Tabane Montwedi</b>	
	Address: <b>Western Precinct, Aviation Park, OR Tambo International Airport</b>	
	<b>1 Jones Road</b>	
	<b>Kempton Park</b>	
	<b>1632</b>	
	The authority of the Employer's Agent is <b>is to act on behalf of the Employer with the authority set out in the contract data.</b>	

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Data: Part 1

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<b>X11</b>	<b>Termination by Employer</b> Terminate the Consultant's obligation to Provide the services for reasons not stated in this contract by notifying the Consultant.
<b>X13</b>	<b>Performance bond</b>  The form of the performance bond is in terms of the NEC PSC3: Performance Bond published on the website <a href="http://www.jointcivils.co.za">www.jointcivils.co.za</a>
X13.1	The amount of the performance bond is 10% of the total of the Prices.
<b>X18</b>	<b>Limitation of liability</b>
X18.1	The <i>Consultant's</i> liability to the <i>Employer</i> for indirect or consequential loss is Nil or R0.00 (Zero Rands)
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 of the incurred losses and/or repairs to the damages caused.
X18.3	The <i>end of liability date</i> is <b>the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.</b>
<b>X20</b>	<b>Key Performance Indicators (not used when Option X12 also applies)</b>
X20.2	A report of performance against each Key Performance Indicator is provided at intervals of 3 months
<b>Z</b>	<b>Additional conditions of contract</b>
The <i>additional conditions of contract</i> are	
<b>Z1</b>	<b>Tax invoices</b>  <b>The <i>Consultant's</i> invoice.</b>  Delete the first sentence of core clause 50.2 and replace with:  Invoices submitted by the <i>Consultant</i> to the <i>Employer</i> include <ul style="list-style-type: none"> <li>the details stated in the Scope to show how the amount due has been assessed, and</li> <li>the details required by the <i>Employer</i> for a valid tax invoice.</li> </ul> Delete the first sentence of core clause 51.1 and replace by:  Each payment is made by the <i>Employer</i> 30 days in arrears calculated from the invoice date or invoice submission date where the submission is made after invoice date receiving the <i>Consultant's</i> invoice showing the details which this contract requires or, if a different period is stated in the Contract Data, within the period stated.
<b>Z2</b>	<b>Communications</b>  Add to the end of the first sentence in core Clause 13.1:  "excluding communication by a communications protocol allowing the interchange of short text messages between mobile telephone devices and a store-and-forward method of writing, sending, receiving and saving messages over the internet."

**Z3 Selection and appointment of the *Adjudicator***

A Party may at any time notify the other Party of the names of two persons he has chosen from the Panel of NEC Adjudicators set up by the Joint Civils Division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see [www.jointcivils.co.za](http://www.jointcivils.co.za)) whose availability to act as the *Adjudicator* the notifying Party has confirmed. The other Party selects one of the two persons chosen to be the *Adjudicator* within four days of receiving the notice, failing which the person chosen by the notifying Party will be the *Adjudicator*. The Parties appoint the selected *Adjudicator* under the NEC3 Adjudicator's Contract, June 2005.

**Z4 Notification of a compensation event**

Replace "eight weeks" in clause 61.3 with "four weeks".

**Zn Parent Company Guarantee**

Delete "and in the form set out in the Scope" in secondary Option clause X4.1 and replace with "and is in the form of the sample Parent Company Guarantee published on the website [www.jointcivils.co.za](http://www.jointcivils.co.za)"

**Zn Performance Bond**

Delete "and in the form set out in the Scope" in secondary Option clause X13.1 and replace with "is in the form of the sample Performance Bond published on the website [www.jointcivils.co.za](http://www.jointcivils.co.za)"

**Zn Using Option A / C when the Prices are accepted after the completion of the concept stage of the project**

Before the end of *project stage 2*, the *Consultant* in conjunction with the *Employer* assesses the total of the Prices to be used in Option A / C for the remaining *project stages* and submits the assessment to the *Employer* for acceptance. If the *Employer* does not accept the *Consultant's* assessment he notifies the *Consultant* of his reasons within four days of the *Consultant's* submission.

The *Consultant* does not start any *services* included in *project stage 3* until he receives the *Employer's* instruction to carry out the *services*.

**Add the following bullet after the first bullet in clause 90.4:**

- the *Employer* and the *Consultant* cannot agree on the assessment of the total of Prices to be used in Option A / C for the remaining *project stages*

**ADDITIONAL Z CLAUSES**

**Z3. Cession, delegation and assignment**

**Z3.1.** The *Consultant* 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 *Consultant*.

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C1.2

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Reference no .....

**Z3.2.** The *Employer* may, on written notice to the *Consultant*, cede and delegate its rights and obligations under this contract to any person or entity.

**Z4. Joint and several liability**

**Z4.1.** If the *Consultant* 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.

**Z4.2.** The *Consultant* 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 *Consultant* on their behalf.

**Z4.3.** The *Consultant* 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*.

**Z5. Ethics**

**Z5.1.** The *Consultant* undertakes:

**Z5.1.1.** 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;

**Z5.1.2.** 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.

**Z5.2.** The *Consultant's* breach of this clause constitutes grounds for terminating the *Consultant's* obligation to Provide the Works or taking any other action as appropriate against the *Consultant* (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.

**Z5.3.** If the *Consultant* 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.

**Z6. Confidentiality**

**Z6.1.** All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the *Consultant* 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.

**Z6.2.** If the *Consultant* is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the *Project Manager*.

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- Z6.3.** This undertaking shall not apply to –
- Z6.3.1.** Information disclosed to the employees of the *Consultant* for the purposes of the implementation of this agreement. The *Consultant* 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;
- Z6.3.2.** Information which the *Consultant* is required by law to disclose, provided that the *Consultant* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Consultant* 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;
- Z6.3.3.** Information which at the time of disclosure or thereafter, without default on the part of the *Consultant*, enters the public domain or to information which was already in the possession of the *Consultant* at the time of disclosure (evidenced by written records in existence at that time);
- Z6.4.** 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*.
- Z6.5.** The *Consultant* ensures that all his SubConsultants abide by the undertakings in this clause.
- Z7. *Employer's Step-in rights***
- Z7.1.** If the *Consultant* defaults by failing to comply with his obligations and fails to remedy such default within [■] 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 subConsultant or supplier of the *Consultant*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Consultant*.
- Z7.2.** The *Consultant* 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 *Consultant* 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.
- Z8. *Liens and Encumbrances***
- Z8.1.** The *Consultant* keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The *Consultant*, 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 Sub-Consultants similarly, vis-a-vis the *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

- Z9. Intellectual Property**
- Z15.1** 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.
- Z15.2** IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works*.
- Z15.3** The *Consultant* gives the *Employer* an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the *works* for the purposes of constructing, repairing, demolishing, operating and maintaining the works.
- Z15.4** The written approval of the *Consultant* is to be obtained before the *Consultant's* IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any *Consultant's* IP available to any third party the *Employer* shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the *Employer* would use to protect its IP.
- Z15.5** The *Consultant* shall indemnify and hold the *Employer* harmless against and from any claim alleging an infringement of IP rights ("**the claim**"), which arises out of or in relation to:
- Z15.5.1** the *Consultant's* design, manufacture, construction or execution of the Works;
- Z15.5.2** the use of the *Consultant's* Equipment, or
- Z15.5.3** the proper use of the Works.
- Z15.6** The *Employer* shall, at the request and cost of the *Consultant*, assist in contesting the claim and the *Consultant* may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.
- Z10. Dispute resolution: The following amendments are made to Option W1:**
- Z16.1 Under clause W1.3, in the fourth row of the first column of the adjudication table, the following words are added after the words "any other matter": "excluding disputes relating to termination of the contract".**
- Z16.2 The following clauses are added at the end of clause W1.3:**
- Z16.2.1** "The Adjudicator shall decide the dispute solely on the written submissions of the parties. No oral submissions shall be heard during adjudication."
- Z16.2.2** "Disputes relating to or arising from termination of the Contract shall not be determined by an adjudicator. Any such dispute shall be referred directly to arbitration."

## Part C1.2 Contract Data

The conditions of contract are the NEC3 Professional Service Contract, April 2013

Each item of data given below is cross-referenced to the clause in the NEC3 Professional Service Contract to which it mainly applies.

### Part two - Data provided by the *Consultant*

Clause	Statement
10.1	<p>The <i>Consultant</i> is (Name):</p> <p>Address</p> <p>Tel No.</p> <p>Fax No.</p> <p>Email:</p>
22.1	<p>The <i>Consultant's</i> key persons are:</p> <p>1 Name:</p> <p><b>Job: Lead Electrical Engineer</b></p> <p>Responsibilities:</p> <p>Qualifications:</p> <p>Experience:</p> <p>2 Name:</p> <p><b>Job: Electrical Engineer 1</b></p> <p>Responsibilities:</p> <p>Qualifications:</p> <p>Experience:</p>

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2 Name:

**Job: Electrical Engineer 2**

Responsibilities:

Qualifications:

Experience:

11.2(3)	The <i>completion date</i> for the whole of the <i>services</i> is three (03) years after the start date.	
11.2(10)	The following matters (if any) will be included in the Risk Register <ul style="list-style-type: none"> <li>• Availability and accuracy of the electrical drawings</li> <li>• Access to site (approvals and permits, police clearance may be required)</li> <li>• Incompatibility of the produced model with other software packages</li> <li>• Deviations from the programme and the cashflow</li> </ul>	
11.2(13)	The <i>staff rates</i> are as stated in the Pricing Data	
25.2	The <i>Employer</i> provides access to the following persons, places and things	
	<b>access to</b>	<b>access date</b>
	1 Any information (electrical drawings) related to the scope of work	Upon award of the project or signing of the contract
	2 All necessary areas that the consultant needs to gain access to to perform the services required	During the contract period as and when required
	3 Relevant Engineering, Operational and Maintenance Personnel of ACSA	Upon award of the project and during the contract period
<b>A</b>	<b>Priced contract with activity schedule</b>	
11.2(14)	The <i>activity schedule</i> is in the Pricing Data	
11.2(18)	The tendered total of the Prices is in the Form of Offer and Acceptance	

### C1.3: Occupational Health and Safety Agreement

#### OCCUPATIONAL HEALTH AND SAFETY MANDATORY AGREEMENT

**AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 OF 1993), AS AMENDED & 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), as amended and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).
3. Construction Regulations 2014

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

**The parties to this Agreement are:**

<b>Name of Organisation:</b>  <p style="text-align: center;"><b>AIRPORTS COMPANY SOUTH AFRICA “ACSA”</b></p>
<b>Physical Address:</b> <p style="text-align: center;"><b>Airports Company South Africa (ACSA) SOC, Western Precinct, Aviation Park, OR Tambo International Airport 1 Jones Road Kempton Park 1632</b></p>

**Hereinafter referred to as “Client”**

<b>Name of organisation:</b>
<b>Physical Address</b>

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



## **MANDATARY'S MAIN SCOPE OF WORK**

**PROFESSIONAL SERVICES REQUEST FOR PROPOSAL TO DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.**

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### **ALL ACSA AIRPORTS**

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#### **1. Definitions**

- 1.1 "Mandatory" is defined as an agent, a principal contractor or a contractor for work, or service provider appointed by the Client to execute a scope of work on its behalf, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant.
- 1.2 "Client" refers to ACSA;
- 1.3 "Parties" means ACSA and the Contractor, and "Party" shall mean either one of them, as the context indicates;
- 1.4 "Services" means the services provided by the Contractor or Stakeholder to ACSA;
- 1.5 "Stakeholder" refers to companies conducting business at ACSA premises or within close proximity where there is an interface with ACSA operations.
- 1.6 "The OHS Act" refers to Occupational Health and Safety Act 85 of 1993, as amended;  
       "The COIDA Act" refers to Compensation for Occupational Injuries and Diseases Act 61 of 1997, as amended; and
- 1.7 "SHE" means Safety, Health and Environment.

**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. Section 37 of the Occupational Health & Safety Act potentially punishes Employers for unlawful acts or omissions of Mandatories where a Written Agreement between the parties has not been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATORY.
3. All documents attached or refer to in the above Agreement form an integral part of the Agreement.
4. 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.
5. Mandatories who utilise the services of other contractors must conclude a similar Written Agreement with those companies.
6. Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.
7. This Agreement shall be binding for all work the Mandatory undertakes for the Client and remains in force for the duration of the contracted period as per Main Contract signed by both parties.
8. The contractor shall submit all necessary documentation as per SHE File Index to the Client seven days prior to starting with any work.

**THE UNDERTAKING**

The Mandatory undertakes to comply with:

**2. REPORTING**

The Mandatory and/or his / her designated person shall report to the Client prior to commencing any work at the airports as well as when the activities change from the original scope of work.

**3. WARRANTY OF COMPLIANCE**

- 3.1 In terms of this agreement the Mandatory warrants that he / she agrees to the arrangements and procedures as prescribed by the Client and as provided for in terms of Section 37(2) of the OHS Act for the purposes of compliance with the Act.
- 3.2 The Mandatory further warrants that he / she and / or his / her employees undertake to maintain such compliance with the OHS Act. Without derogating from the generality of the above, or from the provisions of the said agreement, the Mandatory shall ensure that the clauses as hereunder described are always adhered to by himself / herself and his / her employees.
- 3.3 The Mandatory hereby undertakes to ensure that the health and safety of any other person on the premises is not endangered by the conduct of his / her activities and that of his / her employees.

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#### **4. SHE Risk Management**

- 4.1 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.
- 4.2 The Mandatary shall review the risk registers as and when the scope of work changes and keep the latest version on the SHE File.

#### **5. MEDICAL EMERGENCY RESPONSE**

The Mandatary shall submit a detailed emergency response procedure to the Client OHS Department as part of the SHE File prior to start of work. The procedure shall stipulate how the Mandatary intends to attend to medical emergencies. In the sites where the Client has onsite clinic services, the medical staff can provide first line response and stabilise the patient however the Mandatary shall then activate its own medical response procedure and transport the patient to the medical facilities for further medical attention.

#### **6. APPOINTMENTS AND TRAINING**

- 6.1 The Mandatary shall appoint competent persons as per Section 16(2) of the OHS Act. Any such appointed person shall be trained on any occupational health and safety matter and the OHS Act provisions pertinent to the work that is to be performed under his / her responsibility. Copies of any appointments and certificates made by the Mandatary shall immediately be provided to the Client.
- 6.2 The Mandatary shall at the beginning of the project or activities where there are 5 people and more people working appoint a full-time dedicated Health and Safety resource whom will be dedicated to the project to ensure that Safety, Health and Environmental Requirements are met at all times. The allocated resource shall be based where the project is undertaken for the duration of the project or scope of work execution. The resource shall be trained and qualified on Occupational Health and Safety matters and the OHS Act provisions pertinent to the work that is to be carried out.
- 6.3 The Mandatary shall further ensure that all his / her employees are trained on the health and safety aspects relating to the work and that they understand the hazards associated with such work being carried out on the airports. Without derogating from the foregoing, the Mandatary shall, in particular, ensure that all his / her users or operators of any materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.
- 6.4 Notwithstanding the provisions of the above, the Mandatary shall ensure that he / she, his / her appointed responsible persons and his / her employees are at all times familiar with the provisions of the OHS Act, and that they comply with the provisions of the Act.
- 6.5 The Mandatary shall at all material times be responsible for all costs associated with the performance of its own obligations and compliance with the terms of this Agreement, unless otherwise expressly agreed by the Parties in writing.

## **7. SUPERVISION, DISCIPLINE AND REPORTING**

- 7.1 The Mandatary shall ensure that all work performed on the Clients premises is done under strict supervision and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of his / her employees regarding non-compliance by such employee with any health and safety matters.
- 7.2 The Mandatary shall further ensure that his / her employees report to him / her all unsafe or unhealthy work situations immediately after they become aware of the same and that he / she in turn immediately reports these to the Client within 48 hours with the action taken to mitigate the risk.
- 7.3 Where the hazard or risk identified is the responsibility of the Client to action, the Mandatary shall notify the Client OHS and Safety Department within 24 hours of becoming aware of the hazard or risk for prompt action to mitigate.

## **8. COOPERATION**

- 8.1 The Mandatary and his/her employees shall provide full co-operation and information if and when the Client or his / her representative enquires into occupational health and safety issues concerning the Mandatary. It is hereby recorded that the Client and his / her representative shall at all times be entitled to make such an inquiry.
- 8.2 Without derogating from the generality of the above, the Mandatary and his / her responsible persons shall make available to the Client and his / her representative, on request, all and any checklists and inspection registers required to be kept by him / her in respect of any of his / her materials, machinery or equipment and facilities.

## **9. WORK PROCEDURES**

- 9.1 The Mandatary shall, after having established the dangers associated with the work performed, develop and implement mitigation measures to minimize or eliminate such dangers for the purpose of ensuring a healthy and safe working environment.
- 9.2 The Mandatary shall then ensure that his / her responsible persons and employees are familiar with such mitigation measures. This includes the lock out tag out processes relating to the use of machinery.
- 9.3 The Mandatary shall implement any other safe work practices as prescribed by the Employer and shall ensure that his / her responsible persons and employees are made conversant with and adhere to such safe work practices.
- 9.4 The Mandatary shall ensure that work for which a permit is required by the Employer or any statute is not performed by his / her employees prior to the obtaining of such a permit.

## **10. HEALTH AND SAFETY MEETINGS**

- 10.1 OHS Act requires that Health and Safety Committees be established in case where employee count exceeds 20 onsite, however due to the duration and the nature of the scope of work executed by the contractors and stakeholders enforces that regardless of employees at the

airports. The Mandatary shall establish his / her own health and safety committee(s) and ensure that his / her employees, being the committee members, hold health and safety representatives to attend the Employer's health and safety committee meetings on monthly basis.

10.2 The Mandatary Section 16(2) appointed and SHE resource shall attend the Client SHE meetings as per the schedule communicated. In cases where the Mandatary delegated resources are not able to attend the meeting, an apology shall be submitted to the Client OHS Manager 24 hours before the meeting. An alternative representative shall be deployed to attend the meeting on the half of the Mandatary.

10.3 The Mandatary appointed Section 16(2) and SHE resource shall not skip more than three SHE Committee meetings a year.

## **11. COMPENSATION REGISTRATION/INSURANCE**

11.1 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 or stakeholder is in good standing with the Compensation Fund or Licensed Insurer.

11.2 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.

11.3 The Mandatary shall provide the Client with Public Liability Insurance Cover as required by the Main Contract

11.4 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.

11.5 The Mandatary shall send updated Letter of Good Standing to the Client as and when the Mandatary receives it to ensure that the most valid version is available.

## **12. MEDICAL EXAMINATIONS**

12.1 The Mandatary shall ensure that all his / her employees undergo routine medical examinations and that they are medically fit for the purposes of the work they are to perform.

12.2 Copies of such medical fitness certificates shall be made available to Client as part of the SHE files for review to ensure that they have been conducted by a reputable Occupational Health Practitioner registered with Health Professions Council of South Africa (HPCSA) as a doctor and specialist Occupational Medical Practitioner. Any other additional medical assessment shall be conducted in line with risk exposures.

12.3 Standard (Basic) medical tests shall constitute the following assessments as minimum:

- Individual's history of general and previous occupational health

- Comprehensive physical examination for evaluation of systemic function
- Blood Pressure Measurement
- Weight, Height and Body Mass Index
- Urine screening
- Drug screening
- Audio screening
- Lung Function Test
- Keystone eye test
- Work at Height Questionnaire
- Muscular skeletal questionnaire

### **13. INCIDENT REPORTING AND INVESTIGATION**

- 13.1 All Safety, Health and Environmental Incidents shall be reported to the Client OHS and Safety Department within two hours from the time of occurrence via a phone call, SMS or email or before end of shift. This shall be followed by a formal report in a form of a preliminary report within forty-eight (48) hours.
- 13.2 All incidents referred to in Section 24 of the OHS Act shall be reported by the Mandatary to the Department of Labour and copies of such reporting to be sent to the Client. The Mandatary shall further be provided with copies of any written documentation and medical reports relating to any incident.
- 13.3 The Client retains an interest in the reporting of any incident as described above as well as in any formal investigation and/or inquiry conducted in terms of section 32 of the OHS-Act into such incident.
- 13.4 The Client reserves a right to hold its own investigation into any incident where it deems it is not satisfied with the incident investigation or where the severity of the incident is fatal or damage beyond a value of 1 million and above.

### **14. SUB CONTRACTORS**

- 14.1 The Mandatary shall notify the Client of any subcontractor he / she may wish to source to perform work on his / her behalf on the Client premises. It is hereby recorded that all the terms and provisions contained in this clause shall be equally binding upon the subcontractor prior to the subcontractor commencing with the work. Without derogating from the generality of this paragraph:
- 14.2 The Mandatary shall ensure that the sub-contractor meets all the requirements and is competent for the scope of work contracted for. This includes that approval of the SHE files, SHE Plans associated with the work.

### **15. SECURITY AND ACCESS**

The Mandatary shall request and familiarise its employees with the Client security rules which is not included in this agreement.

### **16. FIRE PRECAUTIONS AND FACILITIES**

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16.1 The Mandatary shall ensure that all his / her employees are familiar with fire precautions at the site(s), which includes fire-alarm signals and emergency exits, and that such precautions are adhered to.

16.2 This includes participating on planned and unplanned emergency drills organised the Client.

## **17. FACILITIES**

The Mandatary shall have a program to upkeep and maintain the facilities leased out to it /shared with/ by the Client as stipulated on lease agreement.

## **18. HYGIENE AND CLEANLINESS**

The Mandatary shall ensure that the work site, ablution, offices and surround area is at all times maintained to the reasonably practicable level of hygiene and cleanliness. In this regard, no loose materials shall be left lying about unnecessarily and the work site shall be cleared of waste material regularly and on completion of the work.

## **19. INTOXICATION AND SUBSTANCE ABUSE**

19.1 Entry to the airside is subjected to Aviation Safety Requirements in line with Client Substance Abuse Policy. No intoxicating substance of any form shall be allowed on site where airside or land side. Any person suspected of being intoxicated shall not be allowed on the site. Any person required to take medication shall notify the relevant responsible person thereof, as well as the potential side effects of the medication.

19.2 The Client reserves a right to do substance abuse testing and main entry points for the Mandatary employees.

19.3 Intoxication limits shall be adhered to as stipulated on Client Substance Abuse Policy.

19.4 Records of substance abuse testing shall be filed on the SHE File and made available to the Employer on request.

## **20. PERSONAL PROTECTIVE EQUIPMENT**

20.1 The Mandatary shall ensure that his / her responsible persons and employees are provided with adequate personal protective equipment (PPE) for the work they may perform and in accordance with the requirements of General Safety Regulation 2 (1) of the OHS Act. The Mandatary shall further ensure that his / her responsible persons and employees always wear the PPE issued to them.

20.2 The Mandatary shall always monitor compliance to PPE of his/her own employees, The Client can at its discretion conduct random PPE compliance inspections and these can be recorded officially on the Client non-conformance reporting tool.

20.3 The Mandatary shall keep records PPE Control cards of each employee those shall be kept on SHE File.



## **21. PLANT, MACHINERY AND EQUIPMENT**

- 21.1 The Mandatary shall ensure that all the plant, machinery, equipment and/or vehicles he / she may wish to utilize on the Client premises is/are at all times of sound order and fit for the purpose for which it/they is/are attended to, and that it/they complies/comply with the requirements of Section 10 of the OHS Act.
- 21.2 Where the Mandatary equipment's interface to the Client's equipment's, a joint risk assessment shall be conducted by the Mandatary and the Client OHS department for the risks to be mitigated prior to the use of such equipment's. It is the responsibility of the Mandatary to notify the Client OHS department of such equipment's and machinery.
- 21.3 In accordance with the provisions of Section 10(4) of the OHS Act, the Mandatary hereby assumes the liability for taking the necessary steps to ensure that any article or substance that it erects or installs at the sites, or manufactures, sells or supplies to or for the Client, complies with all the prescribed requirements and will be safe and without risks to health and safety when properly used.

## **22. USAGE OF THE CLIENT'S EQUIPMENT**

- 22.1 The Mandatary hereby acknowledge that his / her employees are not permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the Client has been obtained, in which case the Mandatary shall ensure that only those persons authorized to make use of same, have access thereto.
- 22.2 The Client shall ensure that it isolates and apply LOTO on any equipment's and machinery where there is an unexpected start up or flow of energy. The Mandatary has a responsibility to apply its own LOTO procedures before starting with work and post the use of the equipment and machinery.

## **23. PERMIT MANAGEMENT**

- 23.1 The Mandatary shall ensure that work for which the issuing of permit to work is required shall not be performed prior to the obtaining of a duly completed approved permit by the Client or relevant Authority.
- 23.2 The Mandatary shall notify the Client of any work to be undertaken on site for the Permit to Work to be issued.

## **24. TRANSPORTATION**

- 24.1 The Mandatary shall ensure that all road vehicles used on the sites are in a roadworthy condition and are licensed and insured. All drivers shall have relevant and valid driving licenses and vehicle shall carry passengers unless it is specifically designed to do so. All drivers shall always adhere to the speed limits and road signs on the premises.
- 24.2 No employees on premises permitted in back of LDV (bakkie) and in front of LDV each driver and passenger must have a separate seat belt.
- 24.3 In the event that any hazardous substances are to be transported on the premises, the



Mandatar shall ensure that the requirements of the Hazardous Substances Act 15 of 1973 are complied with fully all times.

## **25. CLARIFICATION**

In the event that the Mandatar requires clarification of any of the terms or provisions of this agreement, he / she should contact the Client OHS Department.

## **26. DURATION OF AGREEMENT**

This agreement shall remain in force for the duration of the work to be performed by the Mandatar and/or while any of the Mandatar's employees are present on the Client site.

## **27. NON-COMPLIANCE WITH THE AGREEMENT**

If Mandatar fails to comply with any provisions of this agreement, the Client shall be entitled to give the Fourteen (14) days' notice in writing to remedy such non-compliance and if the Mandatar fails to comply with such notice, then the Client shall forthwith be entitled but not obliged, without prejudice to any other rights or remedies which the Mandatar may have in law,

- ❖ Apply low service damages/penalties as stipulated on the main contract between Mandatar and the Client.
- ❖ To claim immediate performance and/or payment of such obligations.
- ❖ Should Mandatar continue to breach the contract on three occasions for the same deviation, then the Client is authorised to suspend the main contract without complying with the condition stated in clause above.

## **28. INDEMNITY**

The Mandatar hereby indemnifies the Client against any liability, loss, claims or proceedings whatsoever, whether arising in Common Law or by Statute; consequent personal injuries or the death of any person whomsoever (including claims by employees of the Mandatar and their dependents); or consequent loss of or damage to any moveable or immoveable property arising out of or caused by or in connection with the execution of the Mandatar's contract with the Client, unless such liabilities, losses, claims or proceedings whatsoever are attributable to the Client's faults. The Mandatar or his/her employees is liable to prove without reasonable doubt that the loss is due to the Client's fault or negligence.

<p align="center"><b>COMPLIANCE WITH THE OCCUPATIONAL HEALTH &amp; SAFETY ACT 85 OF 1993</b></p>
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The Mandatary undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will always 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 OHS Act 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 OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.

## **29. FURTHER UNDERTAKING**

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. A copy of this letter must be made available to the Client.

The Contract/Project Manager shall sign this agreement as the Client's representative.

## 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 OHS Act 85 of 1993 and its regulations are complied with.

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

Expiry date .....

\_\_\_\_\_  
**SIGNATURE ON BEHALF OF MANDATARY**  
(Warrant his authority to sign)

\_\_\_\_\_  
**DATE**

Witnesses:

1. \_\_\_\_\_
2. \_\_\_\_\_

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

\_\_\_\_\_  
**DATE**

Witnesses:

3. \_\_\_\_\_
4. \_\_\_\_\_

#### **C1.4: ACSA Insurance Clauses**

The successful bidder will source the following insurance covers before commencing the work:

- a) Professional indemnity insurance cover for not less than two times the contract value
- b) Aviation / Airside liability insurance cover not less than R300 000 (three hundred thousand rands) for each and every claim.
- c) Proof of insurance must be submitted to ACSA before work commences.



*Insert name of contractor*

*Insert project number*

*Insert title of project*

### **Pro formas for Bonds & Guarantees**

For use with the NEC3 Professional Services Contract, April 2013.

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

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

- Option X4: Parent company guarantee.
- Option X13: Performance bond

These secondary Options require a bond or guarantee "in the form set out in the Scope". Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Scope.

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

**Pro forma Performance Bond – Demand Guarantee (for use with Option X13)***(to be reproduced exactly as shown below on the letterhead of the Bank providing the Bond / Guarantee)***[Insert Employer's name and registered address]**

Bank reference No.

Date:

Dear Sirs,

**Performance Bond – Demand Guarantee for [insert name of Consultant] required in terms of contract [insert Consultant's contract reference number or title]**

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

1.1	"Bank" means	[Insert name of Bank], [●] Branch, Registration No. [●]
1.2	"Bank's Address" means	[Insert physical address of Bank]
1.3	"Contract" means	the written agreement relating to the Services, entered into between the Employer and the Consultant, on or about the [●] day of [●] 200[●] (Contract Reference No. [●]) as amended, varied, restated, novated or substituted from time to time;
1.4	"Consultant" means	[●] a company registered in accordance with the laws of [●] under Registration No [●].
1.5	"Employer" means	[●] a company registered in accordance with the laws of the Republic of South Africa under Registration Number [●]
1.6	"Expiry Date" means	the earlier of <ul style="list-style-type: none"> <li>the date that the Bank receives a notice from the Employer stating that all amounts due from the Consultant as certified in terms of the contract have been received by the Employer and that the Consultant has fulfilled all his obligations under the Contract, or</li> <li>the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by the Employer.</li> </ul>
1.7	"Guaranteed Sum" means	the sum of R[●], ([●] Rand)
1.8	"Services" means	[●]

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

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

- be signed on behalf of the Employer by a director of the Employer;
- state the amount claimed ("the Demand Amount");
- state that the Demand Amount is payable to the Employer in the circumstances contemplated in the Contract.

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

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

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

- shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and

- shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the Employer and the Consultant.
6. The Employer shall be entitled to arrange its affairs with the Consultant in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Consultant or any variation under or to the Contract.
7. Should the Employer cede its rights against the Consultant to a third party where such cession is permitted under the Contract, then the Employer shall be entitled to cede to such third party the rights of the Employer under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- shall expire on the Expiry Date until which time it is irrevocable;
  - is, save as provided for in 7 above, personal to the Employer and is neither negotiable nor transferable;
  - shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
  - shall be regarded as a liquid document for the purpose of obtaining a court order; and
  - shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
  - will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

For and on behalf of the Bank

Bank Signatories(s)

Name(s) (printed)

Witness(s)

Bank's seal or stamp




## **C2: Pricing Data**

### **C2.1 Pricing Instructions**

Remuneration for Professional Services

Remuneration for Professional services will be based on Priced Contract with Activity Schedule as outlined in the document below.

The payment will happen as [er

### **C2.2 Price Schedule**

#### **Airport Training Courses**

1. AIT (Airside Induction Training)  
Initial – R 667.00 Excl. VAT  
Refresher – R 506.00 Excl. VAT
2. General Security Awareness Training – R862 (Excl. Vat)



**3. Permit Prices****OR Tambo International Airport:****Charges****Modify charges**

Type	Charge
<b>PERSONAL</b>	
<b>Penalty - Permit Left in Boarding Gate Card Reader</b>	
Penalty	9742
<b>Permanent</b>	
1st Lost Permit	197
2 yrs Permanent Permit	270
2nd Lost Permit	395
Add Colour	197
Add Colour & Icon	285
Permanent Permit without clips & Cardholder	270
Personal /Tool Permit	358
Personal AVOP/Cell/Tools/Camera Permit	622
Personal AVOP/Cellphone Permit	446
Personal/AVOP Permit	358
Personal/Camera Permit	358
Personal/Cellphone Permit	358
Reprint	197
<b>Personal Permit Without Clip&amp; Cardholder</b>	
<b>VEHICLE</b>	
<b>3 days to 1 month</b>	
<b>Add on charge</b>	
1 - 3 months	321
3 - 6 months	643
6 - 1year	1362
Add On Charge	4786
<b>Permanent</b>	
6mnths-1 Year	1429
Change of registration	53
Edit Vehicle Permit	53
Transponder	785
vehicle permit and Transponder	2241

## Cape Town International Airport:

Discount for department Ramp Handling is: 0 %

TYPE	CHARGE	APPLY DISCOUNT	PAYMENT	INV NR
<b>PERSONAL</b>				
<b>Penalty - Lost</b>				
<input type="radio"/> clear radiobuttons				
<input type="radio"/> 1st Lost	560	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="radio"/> 2nd Lost	906	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> ACSA Staff 1ste Lost	300	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> ACSA Staff 2nd Lost	620	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<b>Permanent</b>				
<input type="radio"/> clear radiobuttons				
<input type="checkbox"/> 1st Damaged Permit	450	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> 2nd Damaged Permit	570	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Add Icon	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Add Zone/Colour	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Icon	70	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="radio"/> Personal Embassy Permit	310	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="radio"/> Personal Permanent Permit	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 1 icon	340	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 2 icons	410	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 3 icons	480	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 4 icons	550	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 5 icons	620	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Personal Permit with 6 icons	690	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="radio"/> Personal Porter Permit	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Reprint	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	
<input type="checkbox"/> Stolen Permit	270	<input type="checkbox"/>	<input type="radio"/> A <input type="radio"/> C	

**Temporary**☐ clear radiobuttons☐ 4 - 30 Days☐ Vehicle Temporary Permit 1 Day☐ Vehicle Temporary Permit 2 Days☐ Vehicle Temporary Permit 3 Days**PARKING****Staff Parking**☐ clear radiobuttons☐ Special SP Permits☐ Staff Parking☐ Taxi Parking**TEMPORARY****OTHER****Penalties**☐ clear radiobuttons☐ Cancelled but fail to return permits no longer in use☐ Failure to cancel and return permits that no longer in use☐ Failure to return visitors and temporary permits upon expiry**VISITOR**

Confidential

**King Shaka International Airport:**

		AIRPORTS COMPANY SOUTH AFRICA	
KSIA PERMIT PRICE LISTING - 2024-2025			
PERSONAL PERMITS			
PERMIT TYPE	DURATION	PRICE EXCL.VAT	PRICE INCL.VAT @15%
Personal Permanent Permit (New)	2 years	188,76	217,07
Personal Permanent Permit (Renewal)	2 years	232,76	267,67
Temporary Personal Permit	1 day	156,13	179,55
Temporary Personal Permit	2 - 5 days	208,76	240,07
Temporary Personal Permit	6 days	188,76	217,07
Permit Icon		44,00	50,60
Embassy Permit	2 years	341,05	392,21
VEHICLE PERMITS			
PERMIT TYPE	DURATION	PRICE EXCL.VAT	PRICE INCL.VAT @15%
Airside Vehicle Permit	1 year	3 581,04	4 118,20
Airside Vehicle Permti Add-on fee	1 year	736,84	847,37
Air Vehicle - Temporary Permit	1-3 months	526,00	604,90
Air Vehicle - Temporary Permit	3-6 months	1 052,00	1 209,80
Air Vehicle - Temporary Permit	1 day	166,66	191,66
Air Vehicle - Temporary Permit	2 days	166,66	191,66
Air Vehicle - Temporary Permit	3 days	166,66	191,66
Airside Vehicle Permit - Change of Vehicle Registration		65,78	75,65
PARKING PERMITS			
PERMIT TYPE	DURATION	PRICE EXCL.VAT	PRICE INCL.VAT @15%
Staff Parking Permit	1 year	1 909,36	2195.76
Staff Parking Permit	1 month	159.11	182.98
Basement Parking Permit	1 year	396,52	456,00
Basement Parking Permit	1 month	30,00	34,50
LOST / DAMAGED PERMITS			
PERMIT TYPE		PRICE EXCL.VAT	PRICE INCL.VAT @15%
Damaged Personal Permit		229,82	264,29
1st Lost Personal Permit		317,00	364,55
2nd Lost Personal Permit		493,00	566,95
3rd Lost Personal Permit		No issue	No issue
1st Lost Airside Vehicle Permit/ Replacement cost		816,31	938,76
2nd Lost Airside Vehicle Permit/ Replacement Cost		904,33	1 039,98
3rd Lost Airside Vehicle Permit		No issue	No issue
Lost Embassy Permit		374,98	431,23
Damaged Airside Vehicle Permit		87,09	100,15
PENALTIES			
PERMIT TYPE		PRICE EXCL.VAT	PRICE INCL.VAT @15%
Expired Personal Permit		2 986,50	3 434,48
Failure to Cancel and Return Personal Permit not in use		13 618,44	15 661,21
Failure to Return Visitor's Permit		3715.00	4 272,25
Late Renewal of Expired Airside Vehicle Permit		3 583,80	4 121,37
PERMIT REPRINT / RE-ISSUE			
PERMIT TYPE		PRICE EXCL.VAT	PRICE INCL.VAT @15%
Personal Permit Reprint		230,00	264,50
To add icons and color		232,76	267,67
Icon		44,00	50,60

Contract

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C2

Part C2: Pricing Data

Pricing Data

Reference no . . . . .

## Chief Dawid Stuurman Airport

Permit Type	Adjusted Prices (VAT Excluded)	Adjusted Prices (VAT Included)	Adjusted Prices (VAT Included)
AVOP Permit	50,83	7,62	58,45
Cell phone	42,72	6,4	49,12
Damaged Card Re-Print	101,67	15,25	116,92
<b>PERMANENT PERMITS</b>			
Permanent Permit 2 yrs. without card holder	169,44	25,41	194,85
Permanent Permit – 2 yrs. with card holder and clip	181,33	25,39	206,72
Permanent Permit – 6 days and over without holder	169,44	25,41	194,85
Permanent Permit – 6 days and over with holder and clip	181,33	27,19	208,52
Upgrading Category	101,67	15,25	116,92
<b>Lost Permits (ADDITIONAL TO PERMIT ISSUED)</b>			
1 <sup>st</sup> Lost including AVOP	101,67	15,25	116,92
2 <sup>nd</sup> lost	200,65	30,09	230,74
<b>Temporary Permits</b>			
1 Day	25,26	3,79	29,00
2-5 days with card holder and clip	32,69	4,9	37,59
2-5 days without cardholder and clip	32,69	4,9	37,59
<b>Permanent Vehicle permits</b>			
1 Year	847,95	127,14	975,09
Change of registration	75,8	11,39	87,19
Edit Vehicle Permit	75,8	11,39	87,19
Add on permit costs	3524,56	531,36	4055,92
<b>Vehicle AIRSIDE PERMITS</b>			
1 Day	30,47	4,57	35,04
2 Days	57,22	8,58	65,8
3 Days	83,97	12,59	96,56
1-3 Months	211,8	31,77	243,57
4-6 Months	418,39	62,75	481,14
6-12 Months	847,95	127,19	975,14
Lost Vehicle Permit	1571,04	235,65	1806,69
<b>VPAF as at 31/07/2013</b>	3564,78	534,71	4099,49
6 months permit (Add on fees / 2)	1782,39	267,35	2049,74
4 months permit (Add on fees / 3)	1188,26	178,23	1366,49
3 months permit (Add on fees / 4)	891,19	133,67	1024,86
2 months permit (Add on fees / 6)	594,13	89,11	683,24
1 months permit (Add on fees / 12)	297,06	44,55	341,61

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

**Bram Fischer International Airport**

TYPE OF PERMIT	PROPOSED CHARGES EFFECTIVE 1 Sept 2021		
	CHARGE	VAT 15%	TOTAL AMOUNT
PERSONAL			
AVOP	R 59,92	R 8,99	R 68,90
	R -	R -	
AVOP 1ST LOST	R 119,83	R 17,97	R 137,81
AVOP 2ND LOST	R 236,51	R 35,48	R 271,99
	R -	R -	
CELL PHONE PERMITS	R 50,37	R 7,56	R 57,93
	R -	R -	
PENALTY – CELL PHONE PERMITS	R -	R -	
1ST LOST	R 119,83	R 17,97	R 137,81
2ND LOST	R 236,51	R 35,48	R 271,99
LOST PERMIT 3RD TIME – NO ISSUE	R -	R -	
	R -	R -	
PHOTO PERMIT WITH CARD HOLDER AND LANYARD	R 213,74	R 32,06	R 245,80
	R -	R -	
	R -	R -	
PHOTO PERMIT WITHOUT CARD HOLDER AND LANYARD	R 199,72	R 29,96	R 229,68
	R -	R -	
PENALTY	R -	R -	
LOST PERMIT 1st	R 332,87	R 49,93	R 382,80
LOST PERMIT 2nd	R 481,77	R 72,27	R 554,04
LOST PERMIT 3RD TIME – NO ISSUE	R -	R -	
	R -	R -	
DAMAGED CARD – REPRINT	R 119,83	R 17,97	R 137,81
UPGRADING CATEGORY	R 119,83	R 17,97	R 137,81
VEHICLE	R -	R -	
ADD ON CHARGE (new amount effective 1st July 2013)	R 4 447,70	667,155	R 5 114,86
1 YEAR	R -	R -	R -
TEMPORARY VEHICLE	R -	R -	
1 – DAY	R 35,91	R 5,39	R 41,29
2 DAYS	R 67,44	R 10,12	R 77,56
3 DAYS	R 98,99	R 14,85	R 113,84
1 – 3 MONTHS (DONE ON APIS)	R 249,65	R 37,45	R 287,09
4 – 6 MONTHS (DONE ON APIS)	R 493,17	R 73,98	R 567,14
6 – 12 MONTHS (DONE ON APIS)	R 999,46	149,91944	R 1 149,38
	R -	R -	
PENALTY	R -	R -	
LOST	R 1 851,78	277,76755	R 2 129,55
	R -	R -	
TEMPORARY	R -	R -	
	R -	R -	
PERSONAL TEMPORARY	R -	R -	
1 DAY	R 29,79	R 4,47	R 34,25
2 – 5 DAYS (LAMINATION AND CLIP)	R 41,48	R 6,22	R 47,71
6 DAYS AND OVER (WITH LAMINATION)	R 199,72	R 29,96	R 229,68
	R -	R -	
OTHER	R -	R -	
LAMINATION	R 4,54	R 0,68	R 5,22
STRING	R 10,00	R 1,50	R 11,50
CARD HOLDER	R 10,00	R 1,50	R 11,50
CROCODILE CLIP	R 4,54	R 0,68	R 5,22
		R -	
		R -	
		R -	
		R -	
COURSE	AMOUNT	VAT	TOTAL
AVOP COURSE	R 355,74	R 53,36	R 409,10
AVOP REFRESHER (2 YRS)	R 249,02	R 37,35	R 286,37
AIRSIDE INDUCTION	R 355,74	R 53,36	R 409,10
AIRSIDE REFRESHER	R 249,02	R 37,35	R 286,37

Contract

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C2

Part C2: Pricing Data

Pricing Data

Reference no . . . . .

**King Phalo Airport**

<b>Number</b>	<b>Type of Permit</b>	<b>Charge</b>	<b>Vat 14%</b>	<b>Total Amount</b>
1.	Personal permit (2years)	R 225.71	R 33.86	R 259.56
2.	Temporary permit (1 day)	R 31.45	R 4.72	R 36.17
3.	Temporary permit (2 - 5 days)	R 43.80	R 6.57	R 50.37
4.	Temporary permit (6 days)	R 210.90	R 31.64	R 242.54
5.	Cell permit	R 53.19	R 7.98	R 61.17
6.	Temporary Vehicle (1 – day)	R 37.92	R 5.69	R 43.61
7.	Temporary Vehicle (2 – days)	R 71.22	R 10.68	R 81.90
8.	Temporary Vehicle (3 – days)	R 104.53	R 15.68	R 120.21
9.	Temporary Vehicle (1 – 3 - months)	R 303.17	R 42.44	R 345.61
10.	Vehicle (One Year)	R 1 055.44	R 147.77	R 1 203.21
11.	Vehicle (Add on charges)	R 3 581.04	R 501.34	R 4 082.38



## Kimberly Airport

April 2021		<b>NEW INCREASED PRICES</b>		
Permit Type	3,9% INCREASE	Adjusted Prices (VAT Excluded)	Adjusted Prices (VAT)	Adjusted Prices (VAT Included)
AVOP Permit		52,81	7,92	60,73
Cell phone		44,39	6,66	51,04
Damaged Card Re-print		105,64	15,85	121,48
<b>PERMANENT PERMITS</b>				
Permanent Permits 2yrs without card holder		176,05	26,41	202,46
Permanent Permit - 2yrs with card holder and clip		188,40	28,26	216,66
Permanent Permit - 6 days and over without holder		176,05	26,41	202,46
Permanent Permit - 6 days and over with holder and clip		188,40	28,26	216,66
Upgrading Category		105,64	15,85	121,48
<b>LOST PERMITS (ADDITIONAL TO PERMIT ISSUED)</b>				
1st Lost including AVOP		105,64	15,85	121,48
2nd Lost		208,48	31,27	239,75
<b>TEMPORARY PERMITS</b>				
1 Day		26,25	3,94	30,18
2 - 5 days with card holder and clip		33,96	5,09	39,06
2 - 5 days without card holder and clip		33,96	5,09	39,06
<b>PERMANENT VEHICLE PERMITS</b>				
1 Year		881,02	132,15	1 013,17
Change of registration		78,76	11,81	90,57
Edit Vehicle Permit		78,76	11,81	90,57
Add on permit costs		3 662,02	549,30	4 211,32
<b>VEHICLE AIRSIDE PERMITS</b>				
1 Day		31,66	4,75	36,41
2 Days		59,45	8,92	68,37
3 Days		87,24	13,09	100,33
1 - 3 Months		220,06	33,01	253,07
4 - 6 Months		434,71	65,21	499,91
6 - 12 Months		881,02	132,15	1 013,17
Lost Vehicle Permit		1 632,31	244,85	1 877,16
<b>VPAF as at 31/07/2013</b>		3 703,81	555,57	4 259,38
6 Months permit (Add on fees / 2)		1 851,90	277,79	2 129,69
4 Months permit (Add on fees / 3)		1 234,60	185,19	1 419,79
3 Months permit (Add on fees / 4)		925,95	138,89	1 064,84
2 Months permit (Add on fees / 6)		617,30	92,60	709,90
1 Month permit (Add on fees / 12)		308,65	46,30	354,94



## Upington Airport

NEW PERMIT PRICES						
PERMIT TYPE	Duration	Old Price	Increase @ 5,6%	Excl. VAT	Vat @ 15%	New Rates
<b>Personal Permit</b>						
<b>Personal visitors permit</b>	<b>1 day</b>	<b>R427,00</b>	<b>R450,91</b>	<b>R392,10</b>	<b>R67,64</b>	<b>R451,00</b>
<b>Personal Temporary permits</b>	<b>2 - 5 days</b>	<b>R427,00</b>	<b>R450,91</b>	<b>R392,10</b>	<b>R67,64</b>	<b>R451,00</b>
<b>Personal Permanent Permits</b>	<b>6 days - 2 yrs.</b>	<b>R229,00</b>	<b>R241,82</b>	<b>R210,28</b>	<b>R36,27</b>	<b>R242,00</b>
<b>Vehicle Permits</b>						
<b>Vehicle temporary permits</b>	<b>1 day</b>	<b>R41,00</b>	<b>R43,30</b>	<b>R37,65</b>	<b>R6,49</b>	<b>R43,00</b>
<b>Vehicle temporary permits</b>	<b>2 days</b>	<b>R70,00</b>	<b>R73,92</b>	<b>R64,28</b>	<b>R11,09</b>	<b>R74,00</b>
<b>Vehicle temporary permits</b>	<b>3 days</b>	<b>R111,00</b>	<b>R117,22</b>	<b>R101,93</b>	<b>R17,58</b>	<b>R117,00</b>
<b>Vehicle temporary permits</b>	<b>3 - 6mths</b>	<b>R540,00</b>	<b>R570,24</b>	<b>R495,86</b>	<b>R85,54</b>	<b>R570,00</b>
<b>Vehicle permanent permit</b>	<b>1 year</b>	<b>R1 216,00</b>	<b>R1 284,10</b>	<b>R1 116,61</b>	<b>R192,61</b>	<b>R1 284,00</b>

**4. Activity Schedule**

<b>1. OR Tambo International Airport (ORTIA)</b>				
<b>Item</b>	<b>Description</b>	<b>Qty (Hours or No. of people)</b>	<b>Rate (Rands)</b>	<b>Amount (Rands)</b>
1.1	Data Gathering, Network Diagrams Review, Validation and Update			
1.2	Development, Validation and Supply of Network Models			
1.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
1.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
1.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
1.6	Reporting (Documentation) and Presentation: Load Flow Studies			
1.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
1.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
1.9	Handover/Deliverables			
1.10	Knowledge Transfer			
1.11	Smart grid Concept Study			
1.12	Disbursement			
1.12.1	Permits			
<b>ORTIA Professional Services: Sub-Total 1</b>				

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Part C2: Pricing Data

Pricing Data

Reference no . . . . .

<b>2. Cape Town International Airport (CTIA)</b>				
<b>Item</b>	<b>Description</b>	<b>Qty (Hours or No. of people)</b>	<b>Rate (Rands)</b>	<b>Amount (Rands)</b>
2.1	<b>Data Gathering, Network Diagrams Review, Validation and Update</b>			
2.2	<b>Development, Validation and Supply of Network Models</b>			
2.3	<b>Load Flow Studies: Simulations and Supply of Simulation Packages</b>			
2.4	<b>Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages</b>			
2.5	<b>Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages</b>			
2.6	<b>Reporting (Documentation) and Presentation: Load Flow Studies</b>			
2.7	<b>Reporting (Documentation) and Presentation: Fault Levels Analysis Studies</b>			
2.8	<b>Reporting (Documentation) and Presentation: Arc Flash Studies</b>			
2.9	<b>Handover/Deliverables</b>			
2.10	<b>Knowledge Transfer</b>			
2.11	<b>Smart grid Concept Study</b>			
2.12	<b>Disbursement</b>			
2.12.1	Permits			
<b>CTIA Professional Services: Sub-Total 2</b>				

<b>3. King Shark International Airport (KSIA)</b>				
<b>Item</b>	<b>Description</b>	<b>Qty (Hours or No. of people)</b>	<b>Rate (Rands)</b>	<b>Amount (Rands)</b>
3.1	<b>Data Gathering, Network Diagrams Review, Validation and Update</b>			
3.2	<b>Development, Validation and Supply of Network Models</b>			
3.3	<b>Load Flow Studies: Simulations and Supply of Simulation Packages</b>			
3.4	<b>Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages</b>			
3.5	<b>Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages</b>			
3.6	<b>Reporting (Documentation) and Presentation: Load Flow Studies</b>			
3.7	<b>Reporting (Documentation) and Presentation: Fault Levels Analysis Studies</b>			
3.8	<b>Reporting (Documentation) and Presentation: Arc Flash Studies</b>			
3.9	<b>Handover/Deliverables</b>			
3.10	<b>Knowledge Transfer</b>			
3.11	<b>Smart grid Concept Study</b>			
3.12	<b>Disbursement</b>			
3.12.1	Permits			
<b>KSIA Professional Services: Sub-Total 3</b>				

<b>4. Chief Dawid Stuurman International Airport (CDSIA)</b>				
<b>Item</b>	<b>Description</b>	<b>Qty (Hours or No. of people)</b>	<b>Rate (Rands)</b>	<b>Amount (Rands)</b>
4.1	<b>Data Gathering, Network Diagrams Review, Validation and Update</b>			
4.2	<b>Development, Validation and Supply of Network Models</b>			
4.3	<b>Load Flow Studies: Simulations and Supply of Simulation Packages</b>			
4.4	<b>Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages</b>			
4.5	<b>Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages</b>			
4.6	<b>Reporting (Documentation) and Presentation: Load Flow Studies</b>			
4.7	<b>Reporting (Documentation) and Presentation: Fault Levels Analysis Studies</b>			
4.8	<b>Reporting (Documentation) and Presentation: Arc Flash Studies</b>			
4.9	<b>Handover/Deliverables</b>			
4.10	<b>Knowledge Transfer</b>			
4.11	<b>Smart grid Concept Study</b>			
4.12	<b>Disbursement</b>			
4.12.1	Permits			
<b>CDSIA Professional Services: Sub-Total 4</b>				

5. King Phalo Airport (KPA)				
Item	Description	Qty (Hours or No. of people)	Rate (Rands)	Amount (Rands)
5.1	Data Gathering, Network Diagrams Review, Validation and Update			
5.2	Development, Validation and Supply of Network Models			
5.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
5.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
5.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
5.6	Reporting (Documentation) and Presentation: Load Flow Studies			
5.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
5.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
5.9	Handover/Deliverables			
5.10	Knowledge Transfer			
5.11	Smart grid Concept Study			
5.12	Disbursement			
5.12.1	Permits			
<b>KPA Professional Services: Sub-Total 5</b>				

6. Bramfischer International Airport (BFIA)				
Item	Description	Qty (Hours or No. of people)	Rate (Rands)	Amount (Rands)
6.1	Data Gathering, Network Diagrams Review, Validation and Update			
6.2	Development, Validation and Supply of Network Models			
6.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
6.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
6.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
6.6	Reporting (Documentation) and Presentation: Load Flow Studies			
6.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
6.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
6.9	Handover/Deliverables			
6.10	Knowledge Transfer			
6.11	Smart grid Concept Study			
6.12	Disbursement			
6.12.1	Permits			
BFIA Professional Services: Sub-Total 6				

7. Kimberly Airport				
Item	Description	Qty (Hours or No. of people)	Rate (Rands)	Amount (Rands)
7.1	Data Gathering, Network Diagrams Review, Validation and Update			
7.2	Development, Validation and Supply of Network Models			
7.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
7.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
7.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
7.6	Reporting (Documentation) and Presentation: Load Flow Studies			
7.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
7.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
7.9	Handover/Deliverables			
7.10	Knowledge Transfer			
7.11	Smart grid Concept Study			
7.12	Disbursement			
7.12.1	Permits			
<b>KIM Professional Services: Sub-Total 7</b>				



8. George Airport				
Item	Description	Qty (Hours or No. of people)	Rate (Rands)	Amount (Rands)
8.1	Data Gathering, Network Diagrams Review, Validation and Update			
8.2	Development, Validation and Supply of Network Models			
8.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
8.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
8.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
8.6	Reporting (Documentation) and Presentation: Load Flow Studies			
8.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
8.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
8.9	Handover/Deliverables			
8.10	Knowledge Transfer			
8.11	Smart grid Concept Study			
8.12	Disbursement			
8.12.1	Permits			
GRJ Professional Services: Sub-Total 8				

9. UPINGTON Airport				
Item	Description	Qty (Hours or No. of people)	Rate (Rands)	Amount (Rands)
9.1	Data Gathering, Network Diagrams Review, Validation and Update			
9.2	Development, Validation and Supply of Network Models			
9.3	Load Flow Studies: Simulations and Supply of Simulation Packages			
9.4	Fault Levels Analysis Studies: Relay Settings Analysis, Protection Coordination Study, Fault level Calculations, Simulations and Supply of Simulation Packages			
9.5	Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages			
9.6	Reporting (Documentation) and Presentation: Load Flow Studies			
9.7	Reporting (Documentation) and Presentation: Fault Levels Analysis Studies			
9.8	Reporting (Documentation) and Presentation: Arc Flash Studies			
9.9	Handover/Deliverables			
9.10	Knowledge Transfer			
9.11	Smart grid Concept Study			
9.12	Disbursement			
9.12.1	Permits			
UPN Professional Services: Sub-Total 9				

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Part C2: Pricing Data

Pricing Data

Reference no . . . . .

**Overall Professional Services**

<b><u>Overall Professional Services</u></b>		<b>Qty (Hours or No. of people)</b>	<b>Rate (Rands)</b>	<b>Total Amount (Rands)</b>
1	<b>ORTIA Professional Services: Sub-Total 1</b>	N/A	N/A	
2	<b>CTIA Professional Services: Sub-Total 2</b>	N/A	N/A	
3	<b>KSIA Professional Services: Sub-Total 3</b>	N/A	N/A	
4	<b>CDSIA Professional Services: Sub-Total 4</b>	N/A	N/A	
5	<b>KPA Professional Services: Sub-Total 5</b>	N/A	N/A	
6	<b>BFIA Professional Services: Sub-Total 6</b>	N/A	N/A	
7	<b>KIM Professional Services: Sub-Total 7</b>	N/A	N/A	
8	<b>GRJ Professional Services: Sub-Total 8</b>	N/A	N/A	
9	<b>UPN Professional Services: Sub-Total 9</b>	N/A	N/A	
10	<b>Disbursements</b>			
10.1	AIT and General Awareness – Cargo learning			
10.2	Additional Work provisional sum (on an as and when basis)	1	SUM	R2 234 913,12
11	<b>Simulation Software</b>			
11.1	Licence			
11.2	Training	15		
12	<b>Sub-Total 1</b>			
13	Contingencies 10% (% of Sub-Total 1)			
14	<b>Sub-Total 2</b>			
15	Value-Added Tax 15% (VAT)			
16	<b><u>TOTAL</u></b>			

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Part C2: Pricing Data

Pricing Data

Reference no . . . . .

PROJECT OR CONTRACT TITLE



### C3: Scope of work

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C3.1	This cover page <i>Employer's Scope</i>	1
C3.2	<i>Consultant's Scope</i>	
	Total number of pages	

## C3.1: EMPLOYER'S SCOPE

### 1) Description of the *services*

There has been an uptake of solar PV energy at ACSA regional airports with plans to roll out at all the other airports at ACSA including the international airports. While the integration of the renewable energy sources into the electrical network offers several benefits and it also has the potential to introduce technical challenges such as voltage fluctuations, voltages rise voltage unbalances, thermal loading of conducts and transformers. Therefore, it is important to study the impact renewable energy sources integration into electricity distribution networks at ACSA airports.

In support of the Carbon Neutrality Agenda, the existing network capabilities as well as the stability to enable the integration of energy mix (new energy sources) for the selected technologies for each site (existing and future loads) need to simulate and analysed to ensure that network reliability and stability is not jeopardized. The development of smart grid technologies is an ongoing conversation within the power sector as the technologies have the potential to transform a traditional power grid into a reliable, efficient, resilient, and sustainable energy system. There are various existing and emerging technologies that when combined are transforming the energy landscape to enable the adoption of smart grid technologies. These technologies include:

- a) **Advanced metering technology:** This technology is also known as smart meters that enable two-way communication between the utility and the consumer. This technology provides real-time data on energy consumption and allows for remote meter reading thus enabling more accurate billing, efficient load management, and greater awareness of energy usage.
- b) **Grid sensors and monitoring:** The deployment of sensors throughout the grid to gather real-time data on power flows, voltage levels, and other crucial parameters within the grid. These sensor enables the monitoring of the grid and analysis of the grid performance, detection of the network faults or potential outages, and optimises the grid operations.
- c) **Distribution Automation:** This entails the deployment of intelligent devices or technologies such as reclosers, switches, and sensors in the distribution network to enable network automation. These devices enhance fault detection and isolation, reduce outages and outage durations, and enable automatic reconfiguration of the network to restore power quickly.
- d) **Energy storage:** This includes various energy storage technologies such as battery energy storage technologies that play a major role in the integration of renewable energy sources and demand side management activities such as peak shaving amongst others. Energy storage technologies enable renewable energy sources integration through the storage of excess generated electricity during periods of low demands and the utilisation of stored energy during periods of high demand. Energy storage enhances the stability of the grid, enables renewable energy sources integration as well as the balancing of supply and demand.

- e) **Microgrids:** Microgrids entails the localisation of energy systems that are capable of operating independently from the grid and are also able to operate while integrated with the utility grid. This entails the integration of the main grid with distributed energy sources (DERs) such as solar energy systems, wind energy systems, as well as energy storage systems amongst others. The distributed energy sources can be disconnected from the main grid during power outages and are able to operate independently to provide reliable power to critical loads.
- f) **Advanced analytics:** This entails leveraging advanced analytics techniques such as machine learning and artificial intelligence to gain insight into from the amount of data generated by the grid through the installed smart meters, grid monitoring sensors, automation technologies, smart devices, microgrid management and monitoring technologies, energy storage controllers, as well as other intelligent technologies installed within various part of the microgrid. The analysis of historical and real-time data improves grid planning, predictive maintenance, asset management, as well as optimisation of grid operations. Grid analytics leads to grid efficiency and enables proactive decision-making.

The objective of the procurement event is to source the services of the service provider to develop a network process simulation that assesses and optimizes ACSA electrical network to better understand the performance of the distribution network and to ensure stability and integration of other sources of energy such as renewable energy sources and energy storage technologies.

The development of network models for the existing electrical reticulation networks for all the nine ACSA Airports and existing buildings will put ACSA in better position to conduct network simulations, load flow studies, as well as fault level analysis studies to understand and assess the current performance of existing network during steady-state and dynamic conditions, as well as to understand the impact of integration of renewable energy sources on fault currents and the ability of the existing to handle the fault currents.

These will enable ACSA to identify gaps and to conduct an assessment on the performance (age & efficiency) of the existing electrical components/equipment that are contained in the network and the overall electrical networks under the current circumstances (current loads & pattern of consumption). The key aspect to be considered in this project is to ensure that knowledge transfer and training of ACSA engineers takes place to ensure that ACSA is capacitated to conduct work of similar nature.

As part of the project scope, the service provider is required conduct a concept study & FEED for a Smart Grid at each Airport to assess the readiness of the existing technologies and components to enable data gathering, to provide ACSA with insights on how to take a step further in taking control and management of its grid through the implementation of Smart Grids

## 2) Interpretation and terminology

The following abbreviations are used in this Scope:

Abbreviation	Meaning given to the abbreviation
ACSA	Airports Company South Africa SOC Limited
BFIA	Bram Fischer International Airport
CAA	Civil Aviation Authority
CDSIA	Chief Dawid Stuurman International Airport
CTIA	Cape Town International Airport
EMC	Electromagnetic Compatibility
EN	European Standards
ICAO	International Civil Aviation Organisation
IEC	International Electrotechnical Commission
IP	Ingress Protection
ISO	International Standard Organisation
MTBF	Mean Time Between Failures
ORTIA	O.R. Tambo International Airport
OSH Act	Occupation Health and Safety Act 85 of 1993
RMS	Root Mean Square
SACAA	South African Civil Aviation Authority
SANS	South African National Standards
TPEC	Tender Preparation and Evaluation Committee
KSIA	King Shaka International Airport

## 3) Specification and description of the *services*

The scope of the project entails conducting the power systems analysis of the electricity distribution network at nine ACSA airports, which includes load flow studies, fault analysis studies, and arc flash studies. Load flow studies enable the obtaining of information such as magnitudes and phase angles of load bus voltages, reactive powers, and voltage angles at generator buses, as well as real and reactive power flow in the distribution system. This information is essential for the continuous monitoring of the current state of the system

and for analyzing the effectiveness of alternative plans for the future, such as adding alternative sources of energy, meeting increased load demand, and planning for distribution network expansions.

Fault analysis studies are key in determining the fault currents within the distribution network and assessing the current protection coordination's ability to provide protection against these fault currents. Additionally, arc flash studies are crucial for identifying potential arc flash hazards, estimating the likelihood of severe injury, and determining the necessary protections, such as personal protective equipment (PPE) and safe working distances. These studies help ensure that our personnel are protected from electrical hazards and that our infrastructure can safely support the expansion projects. The benefits of arc flash studies include enhanced safety protocols, reduced risk of injury, compliance with safety regulations, and improved overall reliability of the electrical system. Investing in these analyses is essential for supporting our growth while maintaining a safe and efficient operational environment.

Conducting load flow studies, fault level studies, and arc flash studies shall follow a systematic approach to ensure accurate results and analysis to effectively implement the findings.

### **3.1 Data Collection, Network Diagram Review, Validation and Update**

Gathering of detailed information about the electrical network, including line impedances, transformer ratings, load data, generator characteristics, current protection settings, historical operational data, and historical fault data. This also includes the following:

- Gathering of all available network diagrams (single line diagrams) for each airport
- Conducting site visits, assessment, and surveys using the relevant tools and instruments to validate that the network diagrams are a true reflection of the physical layout of the electrical distribution network.
- Updating of Network diagrams where necessary. The electrical drawings and CAD models shall be done in compliance with the following documents:
  - CAD & GIS Specifications
  - ELECTRICAL / ELECTRONICS & FIRE – CAD DRAWING STANDARDS & LEGENDS
- Installation of the contractor's meters and other applicable data acquisition systems to collect relevant data to enable simulations. .

### **3.2 Development, Validation and Supply of Network Models**

- Development of detailed network models for all the electricity distribution network at all nine ACSA airports using a power system analysis.



- Validation of network models against the network data to ensure accuracy. The accuracy of the network models, measurement data and the validation of the network models are of utmost importance to ensure that the developed models represent the actual systems and achieving more accurate analysis.
- The network models shall be developed using commercially available power systems analysis software with the functionalities or ability to conduct load flow studies, fault level analysis studies, arcflash studies, and geographical modelling.

### **3.3 Load Flow Studies: Simulations and Supply of Simulation Packages**

Run load flow simulations to determine voltage levels, power flows, and losses under various operating conditions. This entails conducting electrical network simulations and the supply of simulation packages that seeks to:

- Predict the performance of the electrical network at steady state conditions; dynamic conditions such as restart from a grid failure and or back-up power, and loss of power in certain parts of the systems; low load conditions; as well as high-load conditions.
- Study the current performance ACSA's distribution networks, analyse existing network capabilities in terms of power quality. identification of any issues such as voltage drops, overloads, weaknesses, and any other operational issues within the network.
- Assesses the stability parameters of different substations, busbars, and feeders to enable the integration of energy mix (new energy sources) for the selected technologies for each site (existing and future loads).
- To determine the stability and modus operandi of an electrical network with the installation of energy storage technologies in the system.
- Assess the performance and efficiency (incl power losses) of electrical components/equipment that are contained in the network and of the electrical networks under the current circumstances (current loads & pattern of consumption).
- Analyse the existing network capabilities and stability to enable the integration of energy mix (new energy sources) for the selected technologies for each site (existing and future loads).
- Analyse steady state results and reliability of the network before and after addition of each earmarked and existing renewable technology per site.
- Simulation and analysis of any other possible scenarios for the integration of additional renewable energy sources into the electrical network. Other possible scenarios can be suggested by the potential service providers and some scenarios will be provided by the Chief Energy Demand Engineer.
- Simulation and analysis of different circuit configurations without and with renewable energy sources integrated into the distribution network including the normal system configurations, abnormal system configurations, contingency configurations, and future/planned configurations.

- The demand load study needs to be conducted at each feeder and/or transformer, generator to verify that various parts of the circuits are not at the risk of being overloaded. 80% loading on the existing electrical network is to be used as a guideline to advise reserve margin of all QoS parameters.
- Provide no less than a 3-month assessment of actual and simulated performance (accuracy level in prediction; stability of grid) and recommend adjustments to the simulation package. Upon adjustments, the three-month assessment should be repeated to confirm the results.

This also include analysis of the results to identify voltage drops, overloaded components, areas needing improvement, alternative considerations, and the associated risks.

### **3.4 Fault Level Analysis Study: Calculations, Simulations and Supply of Simulation Packages**

The following shall be performed under the Fault Levels Analysis Study

#### **Relay Settings Analysis:**

- Analysis of the current relay settings for protection devices with the electricity distribution network.
- Evaluation of the performance of the existing relay settings under different faults conditions.

#### **Protection Coordination Study:**

- Conduct a protection coordination study to ensure proper coordination between primary and secondary protection devices.
- Identify any inadequacies in the current settings or any other coordination issues.

#### **Fault Levels Calculations:**

- Perform fault level calculations for various fault conditions including symmetrical and non-symmetrical short circuit faults and earth faults.
- Determine the maximum and minimum fault levels at different points/ busses within the network.

#### **System Performance Evaluation:**

- Assess the network protection equipment's ability to handle the calculated fault levels.
- Evaluate the impact of fault levels on equipment and protection devices.
- Examine the protection coordination of the distribution network through fault level analysis to determine the fault currents of the current installations and evaluate the electrical protection systems capacity to handle the fault currents. The fault levels analysis must be done at different scenarios including analysis of the impact integration of the renewable energy sources and energy storage technologies to the fault current levels.
- Identification of any potential issues related to high fault levels and provide recommendations on mitigation of the identified issues.

### **3.5 Arc Flash Studies: Calculations, Simulations and Supply of Simulation Packages**

The following shall be performed under Arc Flash Studies:

- **Arc Flash Calculations:** Calculate incident energy levels and arc flash boundaries for all relevant equipment
- **Hazard Identification:** Identify potential arc flash hazards and assess the risk associated with each.
- **Employee Training:** Conduct training sessions for employees on arc flash hazards, PPE requirements, and safe work practices
- **Periodic Reviews:** Schedule periodic reviews and updates of the arc flash study to account for system changes and ensure ongoing compliance. Engage with the representative at each understand the upcoming changes to the electricity distribution to factor those in the arc flash study in the duration of the contract.

### 3.6 Reporting

#### Load Flow Studies:

Preparation of a comprehensive report detailing the findings, risk assessment, analysis, and the recommendations for network optimisation and future planning. The report shall also contain a detailed alternatives and associated capital plan Bill of Quantities with indicative price estimates.

#### Fault Level Studies

- Preparation of a comprehensive report detailing the findings, analysis, and the recommendations. This shall include detailed recommendations for managing fault levels, including equipment upgraded, protection systems adjustments, and any other operational improvements.
- Propose the optimised protection settings to improve protection coordination and network reliability. Also ensure that the new settings comply with the relevant industry standards and best practices
- Provide a detailed alternatives and associated capital plan Bill of Quantities with indicative price estimates.

#### Arc Flash Studies

Preparation of a comprehensive report detailing the findings, analysis, and the recommendations for improving arc flash study. The following shall be included in the report:

- **PPE Recommendations:** Provide recommendations for personal protective equipment (PPE) based on calculated incident energy levels.
- **Warning Labels:** Usage of standard arc flash warning labels based on the analysis results calculated incident energy levels.
- **Label Installation:** Provide a detailed Bill of Quantities with indicative price estimates for the Installation of labels on all relevant equipment.

### 3.7 Presentation

Presentation of the findings to the ACSA technical team at each site or airport including the Chief Electrical Engineer.

### **3.8 Handover/Deliverable**

This entails the handover of the following information per airport to ACSA:

- a) A manual containing a simulation model that describes the code, assumptions, and process blocks for each airport. The description of each process block should be simulated from first principles. In cases where this cannot be done, ACSA will consider alternative industry acceptable techniques to simulate performance. This manual should be used for training and knowledge transfer to staff.
- b) Comprehensive engineering report detailing the state of the current network, modelling results and simulation methodology, simulation outcomes (load flow analysis), professional opinions, and recommendations. This should also include the recommendations of control systems, the measures, and potential projects to undertake to optimise the electricity distribution network optimisation and improvement to safeguard security of supply to the load (no over voltages, surges etc).
- c) Comprehensive engineering report detailing the state of the protection settings, the results of the fault levels analysis study, modelling results and simulation methodology, simulation outcomes (load flow analysis), professional opinions, and recommendations.
- d) Presentation of all the studies and simulation findings to the ACSA stakeholders per airport.
- e) A compressed folder containing all network models, simulation packages, updated network diagrams, engineering reports, and manuals for each airport. The simulation packages handed over to ACSA shall come with the simulated model and the results and shall be useable by ACSA on the software licence purchased by the service provider for ACSA.

### **3.9 Knowledge Transfer**

This entails knowledge transfer to ACSA engineers by training them to conduct work of similar nature in the future and by taking them through the network diagrams updates, development of network models, network simulations and the results. This should take the form of holding classroom training sessions per airport and performing tutorials for technical staff on the use of the simulation.

### **3.10 Smart Grid Concept Study**

Conduct a concept study & front-end loading on the readiness of the distribution networks to be transformed into a Smart Grid at each Airport. At a minimum, this entails FEL stage 1 to stage 3a deliverables. This entails the ability of the current equipment to make data available and integrate with a SCADA system, as well as provide functional and technical specifications of various technologies within the current distribution that ACSA needs to consider in enabling the adoption of smart grids. The report shall also contain a detailed Bill of Quantities with indicative price estimates.

### 3.11 Simulation Software

- a) Purchasing of a relevant simulation software licence to enable multiple users located at the nine (9) airports to use the software. The service provider shall provide the minimum required hardware for the supplied software licence. As per Annexure A: Standard practice of Software Licenses.
- b) Purchase training for (15) ACSA staff on the simulation software used by the service provider.

### 3.12 Additional Work

Additional work entails professional services to cover any alterations to the distribution networks at all ACSA airports on an as and when required basis. This shall cover the scope of work from 3.1 to 3.11 above.

**Note:**

It is the responsibility of the service provider to engage with each airport technical team to understand each airport's current and future development plans:

- To gather additional information about the planned changes to the network topology
- To better understand the planned changes to the distribution network and to gather additional information about initiatives for the optimisation of the distribution network.
- To make a better determination of load forecasts to be used in the simulations. The airports will provide utility bills and also have energy consumption data for various areas within the airport.
- To gather information about the current and the planned installation of renewable energy sources and energy storage technologies.

## 4) Constraints on how the *Consultant* Provides the Services.

### Management meetings

To be able to manage the contract, the Employer and Consultants will have various meetings, to proactively and jointly manage and minimise adverse risks to the project. The attendees shall have the necessary delegated authority to make decisions in respect of matters discussed at such meetings.

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Every two weeks	To be confirmed	<i>Employer's Agent, Consultant</i>
Overall contract progress and feedback	Monthly	To be confirmed	<i>Employer's Agent, Consultant</i>

Meetings of a specialist nature may be convened as specified elsewhere in this Scope or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *services*. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five (5) 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.

### ***Consultant's key persons***

The *Consultant* is required to nominate a senior partner or director who will have overall responsibility for this project and other senior personnel (Lead professional electrical engineer/s) responsible for the execution of the project. No change may be made without prior consultation with and approval by the *Employer*.

The *Consultant* is required to submit an organogram showing the key persons (engineers) and their lines of authority / communication.

As a minimum, the technical team responsible for executing the professional service shall consist of the following professionals:

Key Personnel	Evidence of competence
Lead professional engineer/s	<ol style="list-style-type: none"> <li>1) BSc/BEng in Engineering (Electrical/Electronics/Computer/Mechatronics)</li> <li>2) ECSA Professional registration</li> <li>3) Evidence of less than 5 years and more than 2-years' experience in electricity distribution network or electrical engineering or electrical network optimisation or network planning.</li> </ol>
Professional engineer/s	<ol style="list-style-type: none"> <li>1) BSc/BEng/BTech in Engineering (Electrical/Electronics/Computer/Mechatronics)</li> <li>2) Relevant ECSA Professional registration: Pr Eng or Pr Tech Eng</li> <li>3) Evidence of less than 5 years and more than 1 year experience in electricity distribution network or electrical engineering or electrical network optimisation or network planning.</li> </ol>

The consultant shall be responsible for bring the other technical experts such as electrical engineering technicians, master electricians, installation technicians with relevant experience, qualifications, training and certification to enable the consultant to execute the full scope of work.

## **Documentation Requirement**

### **Drawings Requirements**

The electrical drawings and CAD models shall be done in compliance with the following documents which shall be provided by ACSA upon signing of the contract by ACSA:

- CAD & GIS Specifications
- ELECTRICAL / ELECTRONICS & FIRE – CAD DRAWING STANDARDS & LEGENDS

### **Engineering Reports**

The engineering reports shall be properly written with key headings including Introduction, objectives, observations, conclusions, and recommendations. The engineering reports will be approved by the lead professional engineer with final approval by the ACSA Chief Electrical Engineer upon a comprehensive review of the reports.

The engineering report shall be a comprehensive engineering report detailing the state of the current network, modelling results and simulation methodology, simulation outcomes, professional opinions, and recommendations. This should also include the recommendations of mitigation measures, control systems, the measures, and potential projects to undertake to ensure and to safeguard security of supply to the load (no over voltages, surges etc).

### **Manuals**

The manual document shall also be properly written and shall contain the description of the simulation model, the conditions being simulated, the assumptions, the process blocks, the results outcomes/results of the simulations.

### **Retention of documents**

Clause 13.6 states that the Consultant retains copies of drawings, specifications, reports and other documents which record the services in the form stated in the Scope. State here what that form is. Note the time period for which the Consultant is to retain such documents is the period for retention stated in the Contract Data.

### **Quality management**

A detailed Quality Management Plan for the implementation of the project shall be provided and shall contain the following as a minimum:

- i. Review processes
- ii. Hierarchy of reviews and approvals of updated diagrams, simulation models, simulation methodologies, simulation results, engineering reports and manuals (both internal and external)
- iii. Validation of circuits or updated schematics
- iv. Validation of Network models

## Occupational Health and Safety

ACSA is committed to adhering to the highest level of health and safety.

The *Consultant* shall at all times comply with the health and safety requirements prescribed by law as they may apply to the services.

The Consultant shall comply with the Health and Safety requirements contained in Part C4.

## Working on the *Employer's* property

Work done on or near an active airport is subject to several special requirements and conditions to ensure the safe operation of the airports at all times. Various limitations and requirements are to be taken cognisance of during the preparation of the tender and construction programme. Each airport will have its own limitations.

This work will be on the Airside and the landside area of the airports, and the normal operations must be able to continue for the duration of the contract.

## Employer's entry and security control, permits, and site regulations

### People restrictions, hours of work, conduct and records

The work under this contract is to be carried out under operational conditions of the airport and is therefore subject to several special requirements and conditions to ensure the safe operation of the airport at all times.

The *Consultant* shall keep records of his people working on the *Employer's* property, including those of his Sub-consultants, and the *Employer's* Agent shall have access to these records at any time.

## 5) List of drawings

### Drawings issued by the *Employer*.

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

Drawing number	Revision	Title
T0084E09/01	0	ORTIA: SITE PLAN WITH APPROXIMATE POSITIONS OF SUBSTATIONS
T0084E09/03	0	ORTIA: PASSENGER TERMINAL BUILDINGS MV SINGLE LINE DIAGRAM
T0084E09/04	0	ORTIA: AIRFIELD MV SINGLE LINE DIAGRAM
T0084E09/05	0	ORTIA: CARGO MV SINGLE LINE DIAGRAM
XXX-KHN-EL-XX-DM-7101-00	B01	KSIA 11KV Electrical Reticulation Master Schematic
NC09026-SLD-MVSG-002	a	CTIA Switching Diagram



EBPE-ELAP-01-01	0	East London Single Line Diagram
GRG 111/RT/SC/2	2	GEORGE AIRPORT 11KV/SOLAR INTEGRAED SCHEMATIC DIAGRAM
PLZ_P7794E08-003-00		PLZ MV RETICULATION
N/A	N/A	BFIA 11KV Switching Diagram & Single line diagram
UPT116/RT/SC/2	A	UPN: BASIC 11kV LAYOUT

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## **Part C4: Site Information**

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- C4.1      Site Information**
- C4.2      ACSA Special Requirements at an Operational Airport**
- C4.3      Baseline HIRA: ACSA Generic Hazard Assessment**

## **Part C4: Site Information**

### **C4.1: Site Information**

#### **1. Description of the Site and its surroundings**

##### **1.1 General description**

The scope of work will be executed for the nine (9) ACSA airports:

- O.R Tambo International Airport
- Cape Town International Airport
- King Shaka International Airport
- Chief Dawid Stuurman Airport
- Bramfischer International Airport
- King Phalo Airport
- Kimberly Airport
- Upington Airport
- George Airport

Permits and permits price differ from airport to airport. The service provider shall familiarize themselves with the security requirements at the each airport.

##### **1.2 Access**

- The Consultant shall liaise with ACSA Security Staff in order to obtain access permits for his staff and vehicle working at the airport.
- Personnel and vehicles entering or leaving the site will be subjected to routine searches.
- The Consultant shall include in his rates the costs for access permits and no extra payment or claim of any kind will be allowed on account of difficulties of access to site.

##### **1.3 Permits**

- The Consultant shall familiarize himself with ACSA's safety and security requirements relating to permits to prevent any unnecessary work delay.
- This shall include the permit application process.
- The Consultant shall have no claim against ACSA in the event that a permit request is refused.
- The following table is not all inclusive, but is provided for illustration purposes:

Permit	Required by/for	Department
AVOP – Airside Vehicle Operator permit	All drivers of vehicles on airside	ACSA Safety
Airside Vehicle Permit	All vehicles that enter airside	ACSA Safety
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
Tools Permit	All persons taking tools to airside	ACSA Security
Laptop Permit	All persons taking laptop computers to airside	ACSA Security
Camera Permit	All persons taking camera equipment to airside	ACSA Security
Hot Works Permit	All welding and/metal cutting work on the airside	ACSA Safety
Airside Projects/Works Permit	For all projects on the airside	ACSA Airport Operations / Safety
Low/Medium Voltage Permit to Work	For all work on substations, distribution boards and cables	ACSA Electrical Maintenance

- 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.
- No work shall be done without a written permission in the form of a permit/works order.

#### 1.4 Cell phones and two-way radios

- Use of cell phones at ORTAFS and airside are not permitted unless the user is in possession of an appropriate Airport permit for the device.
- Cell phone permit issuing authority lies with the ACSA Security department.
- The Consultant will not be allowed to use two-way radios at the Airport unless these radios are of the type, model and frequency range as approved by the ACSA IT department.
- Approved radios may be arranged via said department – payment will be for the account of the Consultant.

### 1.5 Hidden Services

There are several services buried in and around the sites where the Works will take place, and precaution should be taken while carrying out the works. These services provide critical essential services to the Airside operations and should not be disturbed.

Known services include:

- Buildings in the area
- Electrical cables
- Storm water pipes
- Sewerage pipes
- Potable water main
- Fibre optic cables
- Communication cables
- Airfield Ground Lighting
- The Fuel hydrant system

The existing structures near the system have several underground and above ground pipes for pressurized

- Fuel between the valve kiosk and the bund
- Surface mounted pipes for fuel in the bund floor
- Underground and above ground drainage pipes
- Underground electrical cable (not live yet) from substation at RX TX station to the simulator kiosk.
- Existing concrete tank and separator system with fitted two electric pumps.

## **C4.2: ACSA Special Requirements at an Operational Airport**

### **SPECIAL REQUIREMENTS AT AN OPERATIONAL AIRPORT**

Work done on or near an active airport is subject to several special requirements and conditions to ensure the safe operation of the airport at all times.

The work under this contract is to be carried out under operational conditions. Various limitations and requirements are to be taken cognizance of during the preparation of the tender and the construction programme. These limitations will not entitle the contractor to claim for extension of time.

#### **1. Airports Manager**

The Airports Manager is at all times responsible for the effective and safe operation of the airport. The Airports Manager or his designated representative will represent the Employer at the airport, and he has full authority to act on behalf of the Employer, as set out in the contract documents.

The Airport manager will issue the necessary application forms to those who apply to the airport management for an airside vehicle permit and/or an Airport Security Permit and will decide, on receipt of the completed forms, whether or not to issue permits.

The Airport Management may at any time withdraw or suspend an Airside vehicle Permit or any Airside Security Permit.

All negotiations between the Contractor and the airport management shall be through the Engineer.

#### **2. Airport Security and Safety**

All personnel of the Engineer or Contractor will have to undergo a Security and Safety Awareness Programme before the start of the contract.

The Engineer/Contractor shall ensure that airport security is at all times complied with by his own personnel, all subcontractors and their personnel as well as all suppliers.

Access to the security area for personnel, vehicles and construction plant can only be obtained with permission from the Employer. Permits may be required for personnel and vehicles frequently moving through the security check points and shall at all times be visibly displayed while a person or vehicle is within the security area. Identity Documents must be available and presented on request.

Permits are only valid for a specific area inside the security area and the responsibility rests with the Contractor to control the movement of personnel, plant and vehicles to ensure their compliance with this requirement. A Prime Cost Sum has been provided for the cost of any permits required.

The Contractor will be required to provide permits for each and every material delivery vehicle entering the site, and they are to be escorted by a permit and radio license holder. The Employer may withdraw any or all permits without prior notice in the case of misuse, in which case the Contractor will have no claim against the Employer.

The Contractor shall make specific arrangements with the Employer, through the Engineer, to ensure the expedient delivery of time-dependent materials such as asphalt. If required, the Contractor shall supply additional security personnel, approved by the Airport Manager to assist with security control. If, due to the extra volume of construction traffic that has to pass through security, additional entrance facilities have to be provided, it shall be done in consultation with the Airport Manager and Engineer. These facilities and personnel have to be provided by the Contractor.

#### **3. Responsibilities of Consulting Engineers/Contractor**

As a condition of approval of an application for an Airside Vehicle Permit, the Consulting Engineer/Contractor shall ensure that all vehicles and drivers are covered by the Contract Works, Public Liability and SASRIA Special Risks Insurance.



When a vehicle is no longer required for airside use, the Engineer/ Contractor must upon removing it from airside use, remove and return the Airside Vehicle Permit to the airport manager.

The Engineer/Contractor shall immediately report to the airport manager all notifiable accidents and shall ensure that arrangements are in place for the rapid removal and/or repair of its vehicles should they become immobilized on movement areas.

Plant, equipment and personnel of the Engineer/Contractor shall at all times operate and remain 50m clear of all active runways and taxiways (measured from nearest edge of facilities). In Cat 2 conditions the 50m increases to 100m.

#### **4. Accident/Penalties**

The Engineer/Contractor shall report to the Airport Manager any accident involving vehicle or plant under their control where the accident has involved injury or damage to another vehicle, aircraft or airport property; or where there is injury to driver(s) or passenger(s) in the vehicle. The prescribed accident report shall be used for this purpose.

Distinction will be made between the following types of accidents:

- (i) Accidents of minor nature not having effect on the operational efficiency of the involved vehicles, building or airport property.
- (ii) Accidents causing property damage affecting the operational efficiency of vehicles or infrastructure or causing injury to persons traveling in vehicles.

Accidents in the first category must be reported to the Airport Manager within 24 hours. Accidents in the second category must be reported to the Airport Manager immediately and the South African Police Services (SAPS) shall be called to the accident site to investigate and report on the causes of the accident. Where possible neither the driver, the passenger or vehicles should leave the accident site before the arrival of the SAPS.

The parties involved must ensure that adequate arrangements are made for the rapid removal or repair of the immobilized vehicles on **operational** areas.

All accidents/incidents, irrespective of the seriousness thereof, affecting aircraft or loading bridges, must be reported immediately to the AM.

The Airport Manager reserves the right to:

- Withdraw any airport security permit.
- Withdraw any airside vehicle permit, if it is considered necessary tow away vehicles when parked incorrectly.

#### **5. Identification and Warning Lights**

All construction vehicles and self-propelled plant used inside the security area shall be properly marked to promote easy identification. A register of all identification numbers for all vehicles shall be kept up to date by the Contractor and shall at all times be available for inspection by the Airport Manager or Engineer. Each vehicle or self-propelled plant item, as required by the Engineer, shall be fitted with an approved amber rotating warning light which shall be in continuous operation while the vehicle is moving in the security area. The Contractor will be responsible for all costs involved in this item.

#### **6. Additional Security Measures**

- No cameras or the taking of photos will be allowed within the security area without written approval from the Airport Manager. No fire-arms, explosives or any other weapons may be brought into the security area.

- Smoking and the making of fires are prohibited in certain areas of the airport. Open fires may only be made in designated areas after written permission has been obtained from the Airport Manager, who will also supervise such fires. No smoking is allowed in the apron areas.
- No accommodation of personnel will be allowed in the security area of the airport.
- No drawings, sketches, diagrams, information, etc. pertaining to the works, airport, accidents, etc. may be made, reproduced or registered, except when it is necessary for the execution of the contract. No information regarding accidents, airport activities, reports, etc. shall be given to anybody and no press release shall be made, or interview may be given to anybody without the written permission from the Airport Manager.
- Any interference with airport personnel, equipment or aircraft will be considered as an infringement of this clause. The Contractor will be held responsible for any damage, direct or indirect, to any airport equipment, aircraft, etc. caused by his own personnel or those of his subcontractors or suppliers whether on duty or not. The Contractor shall make good all costs necessary to remedy the situation including re-calibration of equipment where necessary. The Contractor shall note that especially navigation equipment is extremely sensitive and may be disturbed by sitting or leaning on it.
- No aircraft may be touched or moved by any member of the construction team. In case of an aircraft accident, no assistance whatsoever may be given by the Contractor unless specifically requested and all staff must stay away from any part of an accident scene for a distance of at least 300m.

If the Consultant is found lacking in any of the security measures or requirements, it will be an enough cause for the termination of all construction activities until the matter has been rectified to the satisfaction of the Airport Manager.

No claim resulting from inadequate security and safety measures will be considered.

## **7. Compliance with Instructions**

If the Contractor does not promptly comply with all instructions of the Airport Manager and Engineer, the Employer has the right to amend the working schedule in aid of safety. The Engineer also retains the right to suspend all works until the Contractor, in the opinion of the Engineer, complies with the requirements.

## **8. Delays Caused by Airport Management**

If delays, leading to an extension of time, are caused by aspects such as airport requirements, a reasonable claim for extension of time may be considered. However, if such delays coincide with delays caused by other circumstances, such as weather conditions, no claim for extension of time caused by requirements of airport management will be considered.

## **9. General Requirements for Execution of the Work**

At the end of each work period, all plant, vehicles, material and obstructions must be removed to a demarcated safe area. The cost of removal of plant and materials and cleaning operations shall be deemed to be included in the relevant work items or in the general items. The Engineer reserves the right to ban any item of plant or equipment which leaks excessive amounts of fuel or oil. In addition, all significant spillages of fuels and oils will be cleared immediately to the satisfaction of the Engineer failing which the Engineer reserves the right to have this work carried out by a third party to the cost of the Contractor.

The Employer retains the right to clean any of the mentioned areas if the Contractor neglects to do so to his satisfaction. In such a case the costs incurred by the Employer will be recovered from the Contractor at a rate of R400,00 per hour or part thereof taken by the sweeping machine of the Employer to do the work. This cost will be deducted from any monies payable to the Contractor.

If night work has to be done only suitable power and lighting units, approved by the Engineer, complying with the requirements of the Occupational Health and Safety Act No. 85 of 1993, SABS 0142-1981 and ICAO Annex 14 regulations shall be used.





#### **10. Times for the Execution of the Works**

Most of the work on this contract must be executed minimizing disruptions to airport operations. If, due to airport requirements, certain aspects of the work have to be done during nighttime, the following will apply:

- The Contractor shall supply sufficient lighting facilities to enable him and his subcontractors to perform the work according to the requirements of the specification.
- At the end of the night's work all lights, power plants, etc. must be removed to a safe area indicated by the Engineer and the Airport Manager. Remuneration for the acquisition, transport, erection and maintenance of lighting and power plants shall be included in the items provided and shall be all-inclusive. Power plants that spill fuel or oil will not be allowed on the works.

#### **11. Movement on the Airport, Barriers, Lights and Marks**

It is the responsibility of the Contractor to properly control the movement of personnel, vehicles and plant connected to the contract. The Contractor shall erect, remove and maintain all temporary barriers, warning lights and marks as required by the Airport Manager.

These control and limitations to movement of the Contractor will not be paid for separately and sufficient provision for it shall be made in the tendered items. Delays and disruption of the contractor's programme or progress as a result of the above requirements will not constitute reason for a claim of whatever nature.

#### **12. Dust and Pollution Control**

The Contractor shall limit dust pollution to the minimum as required by the Airport Manager. During windy conditions, the Engineer may temporarily suspend all work where dust pollution creates unacceptable conditions until such time that conditions return to normal.

In the case of working areas alongside the taxiways it shall be a definite requirement that at all times, weekends included, exposed areas are kept damp and free from dust and loose material which may be sucked into the engines of passing aircraft. The taxiways adjacent to the works shall be swept as required but at least daily.

All costs involved in dust and pollution control shall be borne by the Contractor.

#### **13. Storing of Vehicles, Plant and Materials**

It is a requirement that, at the end of each work period, all vehicles and plant are returned to the designated camp area allocated to the Contractor. With the approval of the Project Manager / Engineer, certain equipment may remain on or near the work area if the area is properly demarcated.

If material is temporarily stored outside the designated campsite, stockpiles shall be limited to a height of 1, 0 m above natural ground level.

#### **14. Fires**

No open fires whatsoever will be allowed. All necessary precautions must be taken to prevent veld or other unauthorized fires.

In the case of fire, including veld fires, the Contractor must instruct his employees to assist the airport management in extinguishing the fire if requested to do so.

The Contractor shall indemnify the Employer against claims that may arise from fires due to negligence by the Contractor or his operations. If it is required by the Employer to extinguish any fires caused by the Contractor, the cost thereof will be for the Contractor.

In case of a fire caused by air traffic activities, the area involved shall immediately be evacuated by the Contractor to an area beyond a radius of 300 m from the fire.

#### **15. Environmental**

The Airports Company South Africa (ACSA) recognizes the impacts airport expansion projects have on the environment during the planning, design and construction phase of new projects and embraces the obligations of corporate environmental responsibility to manage and minimize these impacts as far as possible.

Design consultants are encouraged to explore and implement (where possible) feasible opportunities for minimizing environmental impacts in the form of stormwater, soil and groundwater pollution, resource and raw material utilization, as well as energy and water conservation measures.



### C4.3: Baseline HIRA: ACSA Generic Hazards Assessment

Baseline Risk Assessment	
Project Name:	REQUEST FOR PROPOSAL TO DEVELOP AND VALIDATE NETWORK MODELS AND SIMULATIONS TO ASSESS AND OPTIMISE THE PERFORMANCE OF ACSA'S ELECTRICAL NETWORK AT EACH AIRPORT FOR A PERIOD OF THREE YEARS (03 YEARS): LOAD FLOW STUDIES, FAULT LEVEL ANALYSIS STUDIES, AND ARC FLASH STUDIES.
Document Number: HIRA 1	Revision Number: 001

Risk Severity Definition	Description: Consequence (can lead to)...	Examples of what to look out for...
<b>Category A</b> Catastrophic	One or more multiple deaths and complete loss or destruction of equipment	A major accident
<b>Category B</b> Hazardous	Serious injuries or major damage to equipment	Large reduction in safety margins, physical distress or workload such that the operators cannot be relied upon to perform their tasks accurately or completely
<b>Category C</b> Major	Minor injuries or minor equipment damage	A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of conditions impairing their efficiency
<b>Category D</b> Minor	Incidents	Operating limitations are breached. Procedures are not used correctly
<b>Category E</b> Negligible	Negligible or Inconvenience	Few consequences. No safety consequences. Nuisance

Likelihood Probability	Description	Examples of what to look out for...
Category 1	Extremely Improbable (Rare)	Almost inconceivable that the event shall occur
Category 2	Improbable (Seldom)	Very unlikely that the event shall occur. It is not known that it has ever occurred before
Category 3	Remote (Unlikely)	Unlikely but could possibly occur. Has occurred rarely.
Category 4	Occasional	Likely to occur sometimes. Has occurred infrequently.
Category 5	Frequent	Likely to occur many times or regularly. Has occurred frequently or regularly

		Catas-trophic	Hazardous	Major	Minor	Negligible
		A	B	C	D	E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely Improbable	1	1A	1B	1C	1D	1E

Generic Hazard	Specific component of Hazard	Hazard related consequence	Existing defenses to control risk	Safety Risk Index
Site establishment	Delivering of containers and materials; increased vehicle movements and location of services	Operational disruptions, incidents and service disruptions	Site plan location requires prior approval, services to be identified by ACSA representatives and drivers to be competent and vigilant of other road users. Vehicle inspections are to be conducted daily	2D
Site Access	Access is to be controlled and movement of vehicles and staff are to be monitored to reduce impact on operations	Injuries to Airport users, traffic build up, operational delays, vehicle incidents	Site is to be access controlled. All visitors to site are to report to the site office. Entrance to site camp is to be kept clean, swept after truck deliveries to minimize impact to operations.	2D
Persons on airside	Accidents and injuries	Injury to persons/Fatality	All staff wishing to work on the Airside are to go for Airside induction training. These staff members are to have valid Permits with them at all times. Personal protective equipment required for Airside includes but is not limited to high visibility jackets (as per the procedure, hearing protection, safety shoes & hard hats (if required). An airside safety plan must be submitted before commencement of work.	3A

Vehicles on airside	Accidents and injuries	Damage to aircraft/vehicles/property/persons	All vehicles operating on the Airside are to be fitted with a strobe light, appropriate signage in the form of a prefix, have the necessary vehicle permit in place, to be fitted with a fire extinguisher and are to be serviceable. Vehicles are to be checked by Airside Safety prior to be granted Airside access	4A
Driving on airside	Incidents	Damage to aircraft/vehicles/property / persons	Airside induction is required for all persons entering the Airside. For persons wishing to drive on the Airside Service Road an AVOP 2 permit is required. Where work is to be conducted on the Airfield, then contractors are required to be under escorts or have undergone Radio License training and be in the possession of an AVOP 3 permit The speed limit on the Apron Service Roads is 30km/h, 15km/h at the back of stand and 60km/h on the Perimeter Road. During period of Low Visibility (LVP) will be affected and no vehicular movements are allowed on the Airfield. Low visibility procedures will be in place	4A

Driving on runways and taxiways without permission	Incursion (include definition)	Collision with aircraft/property damage or fatality/ies	Runway and taxiway markings are indicated as per ICAO Annex 14. Permission is required from Air Traffic Control when crossing runways and taxiways. Signage indicating movement areas are painted on the ground or by means of illuminated signage boxes. Only persons in possession of a valid Airside Vehicle Operators Permit with the necessary radio license (Partac training) will be permitted to drive in restricted areas. Vehicles under escort must follow at reasonable distance.	3A
Noise	Health Risks	Noise induced hearing loss	Baseline and annual audiograms are to be conducted. Contractors are to implement a hearing conservation program and issue staff with hearing protection and provide the necessary training in this regard. Contractors to identify noisy operations in passenger areas and are to conduct noise generating operations at off peak times were possible or if unavoidable with ACSA's Project Leaders written permission.	3B
Jet blast	Potential injuries and property	Damage to vehicles/property /persons	Signage warning against jetblast is installed at high risk areas. Risks associated with jetblast are covered during Airside Induction Training. Caution to be taken around aircraft when the anti-collision lights are activated in the Apron bays. 75 meter clearance behind aircraft to be observed to prevent jetblast. Contractors to be aware of aircraft movements	4C



Perimeter fence breach	Security risk	National Key Point Violation	Access and egress points are strictly enforced. Contractors are only to use the entry points as provided by the ACSA Project Leader. No materials are to be stored within 3meter of the perimeter fence.	3B
Crane operations	Height of crane	Flight path obstruction/collision with aircraft	30 meter height restriction procedure – refer to Airfield Operation Department for further information	2A
Weather	Adverse weather conditions	Damage to aircraft/vehicles/equipment	Weather warnings are issued by the Airside Safety Department as and when required. All equipment on the Airside is to be secured	4A
Construction works	Foreign Object Debris (FOD)	Ingestion into aircraft engine	Airside induction is required for all staff working on the Airside, FOD bins are to be used for any FOD found lying on the ground. All waste to be secured to prevent it from becoming airborne (refer to Environmental Terms and Conditions)	4B
Construction works	Working at Height	Injury /fatality	Fall protection plan to be devised by the contractors in line with the Construction Regulations 2014. Rescue plans are to be included	3A
Construction works	Storage of hazardous chemicals substances	Contamination/fire/ injury to persons/ environmental impact	ACSA's Environmental terms and conditions are to be adhered to. All relevant legislation and bylaws are to be adhered to. All necessary permits are to be applied for by the contractor such as transport permits, possession permits and flammable certificates. ACSA Environment and Fire and Rescue to be notified where a spill occurs.	4B

Construction works	Waste	Attracts rodents and birds which leads to bird strikes and adds to FOD	Waste management to be implemented in line with ACSA's Environmental Terms and Conditions	4B
Construction works	Spillages (fuels/oils/hydraulics/chemicals/human waste)	Contamination/Pollution/injury to persons/adverse health effects	ACSA's Environmental terms and conditions and applicable legislative controls are to be adhered to. ACSA Environment and Fire and Rescue to be notified where a spill occurs	4B
Construction works	Dust	Damage to aircraft/injury to persons/adverse health effects/	Dust suppression measures are to be implemented and PPE used where required	4A
Construction works/ Trenching	Damage to underground services. Interruption of critical services	Electrocution, loss of critical services, damage to property, major injuries, aircraft diversions	Consult as-built plans. Scan area before trenching. Trenching to be done under competent supervision.	4A
Delivery of materials	Falling materials or stones or sand	Vehicle/pedestrian accidents	Materials are to be delivered within specified time frames, flagman to be utilized during deliveries, load limitations to be observed, netting is to be used, contractors to clean road after deliveries	4E
Lack of signage – warning signs	Injuries and accidents	Injuries and accidents	Contractors to install sufficient demarcations around construction sites along with the necessary warning signs and beacon lights (refer to Construction Regulations and Traffic Act) No signs are to be removed without prior permission and notification. Temporary way finding signage is required if signage has been disturbed	2D

Road crossing Central Boulevard	Not using the tunnel for crossing	Vehicle and pedestrian accidents	Contractor staff are to cross the Boulevard via the North or South tunnels	4B
Waste management	Environmental impact	Illegal dumping	Temporary laydown areas to be identified and no illegal dumping is permitted.	3C
Trolleys	Damaging trolleys through misuse	Injuries and property damage	Contractors to provide their own trolleys. ACSA's trolleys are for passenger use only	5D
Golf carts	Misuse of golf carts	Injuries and property damage	Contractor staff to be aware of golf cart movements on the Landside. Golf cart use for airport users only and not for contractor use for transporting materials. Golf cart operate in predetermined routes – contractors to be aware thereof	3D
Fire equipment	Use and abuse of fire equipment	Injuries and property damage	Fire equipment is only to be used during emergencies. Contractors to provide their own fire equipment. No materials to be stored in ACSA fire cabinets. Emergency exits are to be kept clear at all times	2B
Unattended bags	Security risk	Injuries/fatality to Airport users/stakeholders/ACSA employees. Bomb threat-damage to property, vehicle and or Operational disruptions	Contractors are not permitted to leave bags unattended as they will be removed and will be handed to SAPS	5C
Speed limits	Car accidents	Injuries and vehicle damage	Speed limits on the Central Boulevard and Elevated Road are 40km/h, exiting the road networks is 50km/h, Tower Road is 50km/h and Freight Road is 50km/h. Speed humps are installed along Tower Road and Freight Road to reduce speeding	3C

Deliveries	Elevated Road	Disrupt traffic flow and passenger movements	No trucks allowed, deliveries to be done via North or South Delivery Yards, delivery notes are required, and delivery times are to be specified.	2C
Overhead works	Falling items	Injuries, vehicles, property damage	Fall protection plan required as per the Construction Regulations 2014.	5C
General housekeeping	Damage to escalators	Injuries, property damages	Escalators are not be used to transport heavy items in the Parkade.	4C

## **Annexure A: RFP Standard Practice on software licences**

### **1. Deployment Options**

The proposed simulation software must either be available in cloud-based or on-premises deployment models to provide flexibility in how it can be accessed and used by ACSA. Bidders should detail the specific features, benefits, and requirements for each deployment option.

#### **1.1 Cloud Solution**

##### **1.1.1 Accessibility**

- i. The cloud-based version of the software must be accessible via a secure web-based platform, allowing users to access the software from any location with an internet connection.
- ii. The software should support multi-device access, including desktops, laptops, and tablets, ensuring seamless usability across different environments.

##### **1.1.2 Security**

- i. The solution must comply with industry-standard security protocols, including data encryption in transit and at rest, multi-factor authentication (MFA), and regular security audits.
- ii. The vendor must demonstrate adherence to cloud security certifications, such as ISO/IEC 27017 (Code of Practice for Information Security Controls for Cloud Services) and SOC 2 Type II.
- iii. The software must support role-based access control (RBAC) to ensure that users only have access to the data and functionalities relevant to their role.

##### **1.1.3 Performance and Scalability**

- i. The cloud solution should be scalable to accommodate additional users or increased computational needs without performance degradation.
- ii. The vendor must provide information on the performance metrics, such as response times, uptime guarantees (e.g., 98.0% uptime SLA), and disaster recovery procedures.

##### **1.1.4 Data Privacy and Compliance**

- i. The cloud solution must comply with relevant data privacy regulations, including POPIA and other applicable data protection laws.

- ii. The vendor must outline the data residency options, ensuring that primary and DR data resides in separate datacenters within the borders of South Africa.

#### 1.1.5 Backup and Recovery

- i. The cloud solution must include automated backup and disaster recovery mechanisms, with configurable retention periods and easy data restoration processes.
- ii. Bidders should detail their backup schedules, data retention policies, and the estimated time to recover from a disaster.

### 1.2 On-Premises Solution

#### 1.2.1 Installation and Setup

- i. The on-premises version of the software must be installable on virtual servers (VMS) within our existing infrastructure.
- ii. Bidders must provide detailed installation guides, configuration manuals, and support during the setup process to ensure a smooth deployment.

#### 1.2.2 Hardware Requirements

- i. Bidders must provide a detailed specification of the hardware requirements necessary to run the software optimally. This should include:
  - a. Minimum and recommended CPU, memory (RAM), and storage requirements.
  - b. Network bandwidth and latency considerations.
  - c. Specific hardware configurations for scenarios with increased load or high-performance needs.
- ii. Information on any required or recommended third-party software or middleware should also be included.

#### 1.2.3 Security

- i. The on-premises solution must support enterprise-level security features, including secure user authentication, data encryption, and compliance with internal security policies.
- ii. Bidders should detail the security features inherent to the on-premises solution and any additional security measures recommended for optimal protection.

#### 1.2.4 Maintenance and Updates

- i. The on-premises software should be able to run on OEM supported enterprise operating system versions (e.g. Windows Server, Red Hat Enterprise Linux, etc)
- ii. Allow for regular updates and patches to be applied with minimal disruption to operations. Bidders should provide a detailed update and maintenance schedule.
- iii. Bidders must outline the process for applying updates, including whether updates are automated, manual, or require vendor assistance.

#### 1.2.5 Performance and Scalability

- i. The on-premises solution should be designed to leverage the organization's existing infrastructure efficiently, with the ability to scale as needed.
- ii. Bidders should provide guidance on how the software scales in an on-premises environment and any additional hardware that may be required for scaling.

#### 1.2.6 Backup and Recovery

- i. The software must include options for backup and disaster recovery that are compatible with the organization's existing systems.
- ii. Bidders should provide a recommended backup strategy, including frequency, retention policies, and recovery time objectives (RTO).

#### 1.2.7 Support and Documentation

- i. Comprehensive support and documentation must be provided for the on-premises deployment, including detailed installation guides, configuration options, and troubleshooting procedures.
- ii. Bidders should include options for remote support or on-site assistance if required.

## 2. Licensing Requirements

The licensing structure for the simulation software must be flexible to accommodate different usage scenarios and provide cost-effective options for the organization. Bidders should offer a range of licensing models to suit the organization's needs and provide transparent pricing for each option.

## 2.1 Licensing Models

### 2.1.1 Perpetual Licensing

- i. A one-time purchase that grants indefinite access to the software and shall include all core software features and functionalities.
- ii. Licensing shall include access to minor updates and patches.
- iii. Bidders should provide a detailed breakdown of the initial cost and any additional fees associated with upgrades or extended support.

### 2.1.2 Subscription Licensing

- i. A time-based licensing model (e.g., annual or multi-year subscriptions) that provides access to the software for the duration of the subscription period.
- ii. Subscription license shall include access to all software updates, including major version upgrades.
- iii. The license shall provide flexible subscription terms (e.g., 1-year, 3-year, 5-year options).
- iv. Bidders should provide pricing for different subscription durations and any discounts available for longer-term commitments.

### 2.1.3 User-Based Licensing

- i. Licensing shall be based on the number of individual users who will have access to the software.
- ii. Licenses shall provide ability to be assigned to specific users with options for named-user licenses or concurrent-user licenses, depending on usage patterns.
- iii. Bidders should provide per-user pricing and any volume discounts available for larger numbers of users.

### 2.1.4 Enterprise Licensing

- i. A comprehensive licensing model that provides access to the software for all potential users within the organization.
- ii. Bidders should provide a cost structure based on organizational size, expected usage, and any additional services included.



## 2.2 Licensing Terms and Conditions

### 2.2.1 License Management

- i. Bidders must provide tools for managing licenses, including tracking usage, assigning licenses to users, and ensuring compliance with licensing terms.
- ii. The software should offer a centralized licensing portal or dashboard for easy administration.

### 2.2.2 Renewal and Upgrade Policies

- i. Clear policies regarding license renewals, including notification periods and any associated fees, must be provided.
- ii. Bidders should detail the process for upgrading licenses (e.g., moving from a user-based to an enterprise license) and the associated costs.

### 2.2.3 Support and Maintenance Inclusions

- i. Licensing should include access to vendor support and maintenance services, with options for different levels of support (e.g., standard vs. premium support).
- ii. Bidders must clarify what support services are included with the license (e.g., technical support, software updates, training) and any additional costs for enhanced support.

## 3. Support and Maintenance

Bidders must provide comprehensive support and maintenance services, including:

- 3.1 **Technical Support:** 24/7 support services with defined response times for critical issues.
- 3.2 **Software Updates:** Regular updates to ensure the software remains compatible with evolving technologies and standards.
- 3.3 **Training:** Initial and ongoing training for end-users and administrators.