



**NEC3 Engineering & Construction Contract**

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

and

(Reg No. \_\_\_\_\_ )

for **Replacement of Navigational Aids Fibre Cable at**  
**O. R. Tambo International Airport**

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**CONTRACT No.**

## Part C1: Agreements & Contract Data

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## C1.1 Form of Offer & Acceptance

### Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

### **REPLACEMENT OF NAVIGATIONAL AIDS FIBRE CABLE AT OR TAMBO INTERNATIONAL AIRPORT**

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

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

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

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

Signature(s)

Name(s)

Capacity

**For the  
tenderer:**

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

Name &  
signature of  
witness

Date

<sup>1</sup> This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.



## Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.



Signature(s)

Name(s)

Capacity

**for the  
Employer**

*(Insert name and address of organisation)*

Name &  
signature of  
witness

Date



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

Note:

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

No.	Subject	Details
1		
2		
3		
4		
5		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification, or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

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

**2. For the Tenderer:**

**3. For the Employer**

Signature _____ Name _____ Capacity _____ On behalf of _____ (Insert name and address of organisation)  Name & signature of witness _____ Date _____	_____ _____ _____ _____ (Insert name and address of organisation)  _____ _____ _____
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## C1.2 ECC3 Contract Data

### C1.2a - Data provided by the *Employer*

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	<b>B: Priced contract with bill of quantities</b>
	dispute resolution Option	<b>W1: Dispute resolution procedure</b>
	and secondary Options	
		<b>X1: Price adjustment for inflation</b>
		<b>X2: Changes in the law</b>
		<b>X13: Performance bond</b>
		<b>X18: Limitation of liability</b>
		<b>Z: Additional conditions of contract</b>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> (Name):	<b>Airports Company South Africa SOC Limited (reg. no: 1993/004149/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa</b>



	Address	1 Jones Road Kempton Park O.R. Tambo International Airport 1627
10.1	The <i>Project Manager</i> is: (Name)	Katlego Mohlala
	Address	1 Jones Road Kempton Park O.R. Tambo International Airport 1627
	Tel	011 921 6510
	Fax	
	e-mail	Katlego.mohlala@airports.co.za
11.2(13)	The <i>works</i> are	Replacement of Navigational Aids Fibre Cable
11.2(14)	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> <li>• <b>Availability of As Built information</b></li> <li>• <b>Access to Site</b></li> <li>• <b>Site Constraints and Constructability</b></li> </ul>
11.2(15)	The <i>boundaries of the site</i> are	Airside manoeuvring area
11.2(16)	The Site Information is in	Part C 4: Site Information
11.2(19)	The Works Information is in	Part C 3: Scope of Work and all documents and drawings to which it makes reference.
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	[2] weeks
<b>2</b>	<b>The Contractor's main responsibilities</b>	Data required by this section of the core clauses is provided by the





**Contractor** in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.

3	Time		
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	<b>2 years after the Contract Date.</b>	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<b>In hold of a valid key date access permit</b>	
		1 Start Date	3 weeks after contract award
		2 Submission of Programme	1 week after contract award
		3 Updates of Programme	[2] weeks
30.1	The <i>access dates</i> are:	<b>Part of the Site</b>	<b>Date</b>
		1 3 weeks after contract award	[TBC]
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	<b>[2] weeks of the Contract Date.</b>	
31.2	The <i>starting date</i> is	<b>The date when ACSA signs the contract</b>	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>[2] weeks.</b>	
35.1	The <i>Employer</i> is not willing to take over		



	the <i>works</i> before the Completion Date.
<b>4</b>	<b>Testing and Defects</b>
42.2	The <i>defects date</i> is <b>[1] year after Completion of the whole of the works.</b>
43.2	The <i>defect correction period</i> is <b>[4] weeks</b>
47	The Contractor submits a quality plan for acceptance within: <b>[2] weeks of the Contract Date.</b>
<b>5</b>	<b>Payment</b>
50.1	The <i>assessment interval</i> is <b>[4] weeks</b>
51.1	The <i>currency of this contract</i> is the <b>South African Rand.</b>
51.2	The period within which payments are made is <b>[4] weeks.</b>
51.4	The <i>interest rate</i> is <b>(i) [2] percent above the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by Nedbank Bank; and</b>  <b>(ii) the exchange rate published by the South African Reserve Bank from time to time for amounts due in other currencies.</b>
<b>6</b>	<b>Compensation events</b>
60.1(13)	The place where weather is to be recorded is: <b>O.R. Tambo International Airport</b>
	The <i>weather measurements</i> to be recorded for each calendar month are, <b>the cumulative rainfall (mm)</b>



		the number of days with rainfall more than 10 mm
		the number of days with minimum air temperature less than 0 degrees Celsius
		the number of days with snow lying at 09:00 hours South African Time
		and these measurements:
	The <i>weather measurements</i> are supplied by	[South African Weather Service]
	The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:	South African Weather Office
	and which are available from:	the South African Weather Bureau and included in Annexure A to this Contract Data provided by the Employer
60.1(13)	Assumed values for the 10 year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month:	As stated in Annexure A to this Contract Data provided by the Employer.
7	<b>Title</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	See Annexure D to this Contract Data provided by the Employer.
81.1	The Contractor's Risk	<b>Add:</b>



		<p><i>Definition of Force Majeure -</i></p> <p><i>The following additional conditions must satisfied:</i></p> <p><i>(1) The Contractor has engaged with the persons responsible for the riot, commotion, disorder, strike or lockout; has met with the persons or leaders; and has recorded the persons or leaders details, their grievances, the organisations involved, all threats made; and has requested the persons or leaders to cease all unlawful conduct; and</i></p> <p><i>(2) The Contractor has obtained proof of the riot, commotion, disorder, strike or lockout, and of any unlawful conduct; and</i></p> <p><i>(3) The Contractor has reported all threats and unlawful conduct to the South African Police Service; and</i></p> <p><i>(4) The Contractor has brought an urgent application to the court on an ex parte basis that correctly identify the respondents and define the unlawful conduct to be interdicted; and</i></p> <p><i>(5) The Contractor has ensured that the court order is enforced.</i></p>
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	<b>See Annexure D to this Contract Data provided by the Employer.</b>
84.1	The <i>Employer</i> provides these additional insurances	<b>See Annexure D to this Contract Data provided by the Employer.</b>
84.1	The <i>Contractor</i> provides these additional insurances	<b>See Annexure D to this Contract Data provided by the Employer.</b>



84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the works, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract for any one event is	<b>Whatever the Contractor deems necessary in addition to that provided by the Employer.</b>
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract for any one event is	<b>As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the Contractor's common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R [●].</b>
9	<b>Termination</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	<b>Data for main Option clause</b>	
B	Priced contract with bill of quantities	Standard System of Measuring Building Works 2015 (Seventh Edition), SANS 1200 Standard Specifications, Particular Specifications (if applicable) and all amended as stated in the preamble to the bill of quantities and as measured

		for items in bill of quantities.
60.6	The <i>method of measurement</i> is	The 6 <sup>th</sup> edition of the Standard System of measuring Building Works published by Association of South African Quantity Surveyors and amended as stated in Part C2.1, Pricing Assumptions.
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is (Name)	the person selected from the ICE-SA Panel of Adjudicators listed in <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> by the Party intending to refer a dispute to him.
	Address	[TBC]
	Tel No.	[TBC]
	Fax No.	[TBC]
	e-mail	[TBC]
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	Arbitration.
W1.4(5)	The <i>arbitration procedure</i> is	The latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern



		<b>Africa) or its successor body.</b>
	The place where arbitration is to be held is	<b>Gauteng Province</b>
	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	<b>the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.</b>
<b>12</b>		<b>Data for secondary Option clauses</b>
<b>X2</b>	<b>Changes in the law</b>	<b>There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.</b>
<b>X7</b>	<b>Delay damages</b>	
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	<b>Amount per day is 0.05% of the contract value, up to the maximum of 10% of the contract value</b>
<b>X13</b>	<b>Performance bond</b>	
X13.1	The amount of the performance bond is	<b>10% of Contract value excluding VAT.</b>
<b>X18</b>	<b>Limitation of liability</b>	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	<b>Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss</b>



		of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	<b>The total of the Prices</b>
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	<b>The total of the Prices</b>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p><b>The total of the Prices other than for the additional excluded matters.</b></p> <p><b>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</b></p> <p><b>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</b></p> <ol style="list-style-type: none"> <li>1. Defects due to his design which arise before the Defects Certificate is issued,</li> <li>2. Defects due to manufacture and fabrication outside the Site,</li> <li>3. loss of or damage to property (other than the <i>works</i>, Plant and Materials),</li> <li>4. death of or injury to a person;</li> <li>5. damage to third party property; and</li> <li>6. infringement of an intellectual property right.</li> </ol>





X18.5

The *end of liability date* is **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.**

Z

The **Additional conditions of contract** are Z1 to Z24 below.

## AMENDMENTS TO THE CORE CLAUSES

Z1

**Interpretation and the law**

Z1.1

**Add to core clause 12.3:** Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

Z1.2

**Add the following as a new core clause 12.5:**

Z1.2.1

In this contract:

Z1.2.1.1

references to any Party to the Contract include its successors or permitted assigns;

Z1.2.1.2

references to the Contractor include the obligations of its personnel;

Z1.2.1.3

the references to the provisions of any law include such provisions as amended, re-enacted or consolidated from time to time in so far as such amendment, re-enactment or consolidation applies or is capable of applying to any works under this Contract;



<b>Z1.2.1.4</b>	references to this Contract and any deed, Contract or instrument are deemed to include references to this Contract or such other deed, agreement or instrument as amended, novated, supplemented, varied or replaced from time to time;
<b>Z1.2.1.5</b>	references to a "person" include a natural person, company or any other artificial person or other corporate entity, a charity, trust, partnership, joint venture, syndicate, or any other association of persons;
<b>Z1.2.1.6</b>	references to "month" means a calendar month;
<b>Z1.2.1.7</b>	headings are for convenience only and are not taken into consideration in the interpretation of the Contract;
<b>Z1.2.1.8</b>	where any number of days is prescribed, those days are reckoned exclusively of the first and inclusively of the last day unless the last day falls on a day that is not a working day, in which event the last day is the next succeeding working day;
<b>Z1.2.1.9</b>	any provision in Contract that is or may become illegal, invalid or unenforceable in any jurisdiction is ineffective to the extent of such prohibition or unenforceability in such jurisdiction and is treated as severed from the balance of Contract in such jurisdiction, without invalidating the remaining provisions of Contract in such jurisdiction or affecting it in any other jurisdiction;
<b>Z1.2.1.10</b>	references to any amount means that amount exclusive of VAT, unless the amount expressly includes VAT;
<b>Z1.2.1.11</b>	the rule of construction that if general words or terms are used in association with specific words or terms that are a species of a particular genus or class, the meaning of the general words or terms shall be restricted to that same class shall not apply, and whenever the word "including" is used followed by specific examples, such examples shall not be interpreted so as to limit the meaning of any word or term to the same genus or class as the examples given;
<b>Z1.2.1.12</b>	the rule of construction that the Contract is interpreted against or to the disadvantage of the party responsible for the drafting or preparation of Contract does not apply;
<b>Z1.2.1.13</b>	words and abbreviations that have well known technical or trade meanings are used in the Contract in accordance with such recognized meanings;



Z1.2.1.14	references to a " <i>subsidiary</i> " or a " <i>holding company</i> " is references to a direct or indirect subsidiary or holding company as defined in the law of the jurisdiction of the place of incorporation of the company that has a subsidiary or holding company and " <i>affiliate</i> " is any company that is under common control with such subsidiary or holding company;
Z1.2.1.15	time is of the essence in the performance of the parties' respective obligations.
Z2	<b>The Project Manager and Supervisor: add the following at the end of core clause 14.2:</b>
Z2.1	The Project Manager and the Supervisor may take an action which they have delegated.
Z3	<b>Early Warning: add the following at the end of core clause 16.2:</b>
Z3.1	The Contractor ensures that a subcontractor attends risk reduction meeting if its attendance would assist in deciding the actions to be taken.
Z4	<b>Providing the Works: Delete core clause 20.1 and replace with the following:</b>
Z4.1	The <i>Contractor</i> provides the works in accordance with the Works Information and warrants that the results of the Works, when complete, shall be fit for their intended purpose as stated in the Works Information, and if no such purposes is stated, the ordinary purpose of the Works.
Z5	<b>Subcontracting:</b>
Z5.1	<b>The following clause is added as a new core clause 26.4:</b> "Within 5 days of request by the <i>Project Manager</i> , the Contractor provides proof to the <i>Project Manager</i> that the Contractor's payment obligations towards its Subcontractors have been discharged. Failure by the Contractor to provide such proof to the satisfaction of the <i>Project Manager</i> entitles the <i>Employer</i> to instruct the <i>Project Manager</i> to certify payment directly to any such Subcontractor and the <i>Contractor</i> shall have no recourse to recover such amounts from the <i>Employer</i> . Such direct payment do not create privity of contract between the Employer and such Subcontractor. The <i>Employer</i> may recover such direct payment from the <i>Contractor</i> ."
Z6	<b>Other responsibilities: add the following at the end</b>



**of core clause 27:**

Z6.1	The <i>Contractor</i> has satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information and drawings provided to him as at the Contract Date.
Z6.2	The <i>Contractor</i> is responsible for the correct setting out of the <i>Works</i> in accordance with the original points, lines and levels stated in the <i>Works</i> Information or notified by the <i>Project Manager</i> , <i>Supervisor</i> or the <i>Employer</i> . Any errors in the positioning of the <i>Works</i> are rectified by the <i>Contractor</i> at the <i>Contractor's</i> own costs.
Z7	<b>Acceleration: add the following new provisions at the end of core clause 36:</b>
Z7.1	The Project Manager's reply is either:
Z7.1.1	A notification that the quotation is accepted, in which case, the <i>Project Manager</i> changes the Prices, Completion Date and Key Dates and accepts the revised programme; or
Z7.1.2	A notification that the quotation is not accepted and that the Prices, Completion Date and Key Dates are not changed.
Z8	<b>Extending the defects date: add the following as a new core clause 46:</b>
Z8.1	If the <i>Employer</i> cannot use the <i>works</i> due to a Defect, which arises after Completion and before the <i>defects date</i> , the <i>defects date</i> is delayed by a period equal to that during which the <i>Employer</i> , due to a Defect, is unable to use the <i>works</i> .
Z8.2	If part of the <i>works</i> is replaced due to a Defect arising after Completion and before the <i>defects date</i> , the <i>defects date</i> for the part of the <i>works</i> which is replaced is delayed by a period equal to that between Completion and the date by when the part has been replaced.
Z8.3	The <i>Project Manager</i> notifies the <i>Contractor</i> of the change to a <i>defect date</i> when the delay occurs. The period between Completion and an extended <i>defects date</i> does not exceed twice the period between Completion and the <i>defects date</i> stated in the Contract Data.
Z9	<b>Quality Management System: add the following as a new core clause 47:</b>



Z9.1	The <i>Contractor</i> implements and maintains a quality management system with the requirements stated in the Works Information.
Z9.2	Within the period stated in the Contract Data, the <i>Contractor</i> provides the <i>Project Manager</i> with a quality plan for acceptance. A reason for not accepting the quality plan is that it does not allow for the <i>Contractor</i> to Provide the Works.
Z9.3	If any changes are made to the quality plan, the <i>Contractor</i> provides the <i>Project Manager</i> with the changes quality plan for acceptance.
Z9.4	The <i>Project Manager</i> may instruct the <i>Contractor</i> to correct a failure to comply with the quality plan. This instruction is not a compensation event.
Z10	<b>Assessing the amount due:</b>
Z10.1	<b>Delete the second bullet point of core clause 50.1 and replace with the following:</b> “within thirteen weeks of termination of this Contract”
Z11	<b>Final assessment: add the following as a new core clause 53:</b>
Z11.1	The <i>Project Manager</i> makes a final assessment and certifies final payment in accordance with the Contract. The final payment is made within four weeks of the assessment.
Z11.2	An assessment of the final amount due is conclusive evidence of the final amount due under or in connection with the Contract, unless a Party raises a dispute in relation to the assessment of the final amount due.
Z11.3	The assessment of the final amount due is changed to include any agreement the Parties reached and/or a decision of the Adjudicator which has not been referred to the tribunal within four weeks of that decision. The changed assessment becomes conclusive evidence of the final amount due under or in connection with the Contract.
Z12	<b>Notifying compensation events:</b>
Z12.1	<b>Delete the last sentence in core clause 61.3 and replace with the following:</b> “If the <i>Contractor</i> does not notify a compensation event within four weeks of becoming aware of the event, he is not entitled to a change in the Prices, the Completion date or a Key Date and the <i>Employer</i> is absolved from all liability in relation to such event.”



<b>Z13</b>	<b>Assessing compensation events:</b>
<b>Z13.1</b>	<b>The following is added at the end of core clause 63.4:</b> “the <i>Contractor</i> shall only be entitled to changes to the Prices, the Completion Date and/or the Key Date if the compensation event affects the critical path.”
<b>Z14</b>	<b>Termination</b>
<b>Z14.1</b>	<b>Add the following to core clause 91.1, at the second main bullet, fifth sub-bullet point, after the words “assets or”:</b> “business rescue proceedings are initiated or steps are taken to initiate business rescue proceedings”.
<b>AMENDMENTS TO THE SECONDARY OPTION CLAUSES</b>	
<b>Z15</b>	<b>Changes in Law: Add the following clause to secondary option X2 as X2.2:</b>
<b>Z15.1</b>	A change in law is defined as:
<b>Z15.1.1</b>	the adoption, enactment, promulgation, coming into effect, repeal, amendment, reinterpretation, change in application or other modification after the Contract Date of any law, excluding (i) the enactment of any bill inside the country, but only if such bill is enacted without any material changes being made to the contents of such bill from the form published in the Gazette (as defined in the Interpretation Act, 1957) as at the Contract Date, and (ii) any such modification in law relating to any taxes, charges, imposts, duties, levies or deductions that are assessed in relation to a person’s income
<b>Z15.1.2</b>	any permit being terminated, withdrawn, amended, modified or replaced, other than (i) in accordance with the terms upon which it was originally granted, (ii) as a result of the failure by the <i>Contractor</i> to comply with any condition set out therein, or (iii) as a result of any act or omission of the <i>Contractor</i> , any Subcontractor or any affiliate to the <i>Contractor</i> .
<b>Z16.</b>	<b>Delay damages: add the following to secondary Option X7 (if applicable in this contract)</b>
<b>Z16.1</b>	If the amount due for the <i>Contractor</i> ’s payment of delay damages reaches the limits stated in this Contract Data for Option X7, the <i>Employer</i> may, at its sole discretion, terminate the <i>Contractor</i> ’s obligation to Provide the Works.
<b>Z16.2</b>	If the <i>Employer</i> terminates in terms of this clause, the procedures and payment on termination as those



applied for reasons R1 to R15 or R18 stated in the Termination Table

<b>Z17</b>	<b>Performance Bond</b>
<b>Z17.1</b>	<b>Amend the first sentence of clause X13.1 to read as follows:</b> The <i>Contractor</i> gives the <i>Employer</i> an unconditional, on-demand performance bond, provided by a bank or insurer which the <i>Project Manager</i> and the <i>Employer</i> have accepted, for the amount stated in the Contract Data and in the form set out in Annexure B of this Contract Data.
<b>Z17.2</b>	<b>Add the following new clause as Option X13.2:</b> The <i>Contractor ensures</i> that the performance bond is valid and enforceable until the end of the <i>contract period</i> . If the terms of the performance bond specify its expiry date and the end of the <i>contract period</i> does not coincide with such expiry date, four weeks prior to the said expiry date, the <i>Contractor</i> extends the validity of the performance bond until the end of the <i>contract period</i> . If the <i>Contractor</i> fails to so extend the validity of the performance bond, the <i>Employer</i> may claim the full amount of the performance bond and retain the proceeds as cash security
<b>Z18</b>	<b>Limitation of liability: Insert the following new clause as Option X18.6:</b>
<b>Z18.1</b>	The <i>Employer's</i> liability to the <i>Contractor</i> for the <i>Contractor's</i> indirect or consequential loss is limited to R0.00.
<b>Z18.2</b>	Notwithstanding any other clause in this contract, any proceeds received from the security bonds and guarantees provided by the <i>Contractor</i> in terms of this Contract and any insurances or any proceeds which would have been received from any insurances but for the conduct of the <i>Contractor</i> shall be excluded from the calculation of the limitations of liability listed in the contract.
<b>ADDITIONAL Z CLAUSES</b>	
<b>Z19</b>	<b>Cession, delegation and assignment</b>
<b>Z19.1</b>	The <i>Contractor</i> shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> , 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 <i>Contractor</i> .



Z19.2	The <i>Employer</i> may, on written notice to the <i>Contractor</i> , cede and delegate its rights and obligations under this contract to any person or entity.
Z20	<b>Joint and several liability</b>
Z20.1	If the <i>Contractor</i> 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 <i>Employer</i> for the performance of the Contract.
Z20.2	The <i>Contractor</i> shall, within 1 week of the Contract Date, notify the <i>Project Manager</i> and the <i>Employer</i> of the key person who has the authority to bind the <i>Contractor</i> on their behalf.
Z20.3	The <i>Contractor</i> 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 <i>Employer</i> .
Z21	<b>Ethics</b>
Z21.1	The <i>Contractor</i> undertakes:
Z21.1.1	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;
Z21.1.2	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 <i>Employer</i> is subject, including but not limited to the Prevention and Combating of Corrupt Activities Act, 12 of 2004.
Z21.2	The <i>Contractor's</i> breach of this clause constitutes grounds for terminating the <i>Contractor's</i> obligation to Provide the Works or taking any other action as appropriate against the <i>Contractor</i> (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.
Z21.3	If the <i>Contractor</i> 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 <i>Employer</i> , the <i>Employer</i> 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.





<b>Z22</b>	<b>Confidentiality</b>
<b>Z22.1</b>	All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the <i>Contractor</i> 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 <i>Project Manager</i> or the <i>Employer</i> , which consent shall not be unreasonably withheld.
<b>Z22.2</b>	If the <i>Contractor</i> is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the <i>Project Manager</i> .
<b>Z22.3</b>	This undertaking shall not apply to –
<b>Z22.3.1</b>	Information disclosed to the employees of the <i>Contractor</i> for the purposes of the implementation of this agreement. The <i>Contractor</i> 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;
<b>Z22.3.2</b>	Information which the <i>Contractor</i> is required by law to disclose, provided that the <i>Contractor</i> notifies the <i>Employer</i> prior to disclosure so as to enable the <i>Employer</i> to take the appropriate action to protect such information. The <i>Contractor</i> 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;
<b>Z22.3.3</b>	Information which at the time of disclosure or thereafter, without default on the part of the <i>Contractor</i> , enters the public domain or to information which was already in the possession of the <i>Contractor</i> at the time of disclosure (evidenced by written records in existence at that time);
<b>Z22.4</b>	The taking of images (whether photographs, video footage or otherwise) of the <i>works</i> or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the <i>Project Manager</i> . All rights in and to all such images vests exclusively in the <i>Employer</i> .
<b>Z22.5</b>	The <i>Contractor</i> ensures that all his Subcontractors abide by the undertakings in this clause.
<b>Z23</b>	<b>Liens and Encumbrances</b>
<b>Z23.1</b>	The <i>Contractor</i> keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The <i>Contractor</i> , vis-a-vis the <i>Employer</i> , waives all



and any liens which he may from time to time have, or become entitled to over such Equipment and any part thereof and procures that his Subcontractors similarly vis-a-vis the *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

<b>Z24</b>	<b>Intellectual Property</b>
<b>Z24.1</b>	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.
<b>Z24.2</b>	IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the <i>works</i> .
<b>Z24.3</b>	The <i>Contractor</i> gives the <i>Employer</i> an irrevocable transferrable, non-exclusive, royalty free licence to use and copy all IP related to the <i>works</i> for the purposes of constructing, repairing, demolishing, operating and maintaining the works.
<b>Z24.4</b>	The written approval of the <i>Contractor</i> is to be obtained before the <i>Contractor’s</i> IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any <i>Contractor’s</i> IP available to any third party the <i>Employer</i> shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the <i>Employer</i> would use to protect its IP.
<b>Z24.5</b>	The <i>Contractor</i> shall indemnify and hold the <i>Employer</i> harmless against and from any claim alleging an infringement of IP rights (“ <b>the claim</b> ”), which arises out of or in relation to:



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

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

Month	<i>Weather measurement</i>				
	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	[125]	[3]	[0]	[0]	
February	[110]	[1]	[0]	[0]	
March	[120]	[2]	[0]	[0]	
April	[75]	[2]	[0]	[0]	
May	[70]	[2]	[0]	[0]	
June	[60]	[2]	[0]	[0]	
July	[60]	[2]	[0]	[0]	
August	[70]	[2]	[0]	[0]	
September	[75]	[2]	[0]	[0]	
October	[120]	[2]	[0]	[0]	
November	[125]	[2]	[0]	[0]	
December	[125]	[4]	[0]	[0]	

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



## Annexure B: ACSA Panel of Adjudicators

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

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

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## Annexure C: ACSA Insurance Clauses

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

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

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

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

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

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

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

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

This insurance contains the following limitations and warranties ;

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

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

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

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

#### **Section II of the Policy – Contractors Public Liability**

**Public Liability Insurance** which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of



**R100,000,000** in respect of any one occurrence or series of occurrences consequent on or attributable to one source or original cause.

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

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

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

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

The Contract Works SASRIA cover excludes consequential or indirect loss or damage of any kind or description whatsoever.

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

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

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

This insurance is in respect of liability relating to aircrafts.

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

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

The Policy only covers the rectification of the works and excludes all consequential losses.

Professional Duties do not include:

- a) Labour and construction work which would normally be the responsibility of the building or engineering contractor.



- b) Supervision of the construction works usually undertaken by a building or engineering contractor.
- 1.2 The **Contractor** shall familiarise itself fully with the details of such insurance effected by the Employer. The Contractor shall comply to all the terms and conditions of the Employer arranged policies and the Contractor shall be deemed to be fully aware of all the conditions, limits, limitations, exclusions/exceptions and deductibles that are contained in the Employer arranged policies. Copies of the Employer arranged policies are obtainable on request from the Employer and if the Contractor is of the opinion that additional insurance is required, such shall be for the Contractors account.
- 1.3 The Employer shall pay the premium in connection with the insurances effected by the Employer. The Employer is entitled to all return premiums, dividends, discounts, or adjustments in connection with the insurances effected by the Employer.
- 1.4 The Contractor shall not include any premium charges for this insurance except to the extent, which he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor.

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

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

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

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

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

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

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

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

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

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

**b) Contract Works SASRIA**

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

**c) Aviation Liability Insurance ;**

In respect of each and every loss or damage or injury - **US\$250,000**.



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

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

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

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

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

Airports Company South Africa :  
 Nokulunga Masiza  
 Tel: +27 (0)11 723 1400  
 M: +27 (0)79 512 0532  
[Nokulunga.Masiza@airports.co.za](mailto:Nokulunga.Masiza@airports.co.za)

Buhle Mnguni  
 D: +27 (0)11 723 1400  
 M: +27 (0)74 535 9075  
[Buhle.Mnguni@airports.co.za](mailto:Buhle.Mnguni@airports.co.za)

- b) Preserve damage and make it available for inspection by a representative of the Insurers.
- c) Wherever possible, photographs of damage should be taken.
- d) Inform the police authorities promptly in the event of loss or damage by theft, burglary or any malicious persons(s) for the purpose of recovering any property so lost, discovering the guilty person or persons, and having him, her or them duly prosecuted.
- e) Advise the Insurers of any other insurance(s) which may cover the same loss, damage or injury, or any part thereof.
- f) Give to the Insurers every assistance to enable the Insurers to settle or resist any claim against the Insured, or institute any proceedings;
- g) On completion the Claims Advice Form, the form must be sent to the Employers Insurance Brokers for further action (the original may be emailed to the Employers Insurance Broker). (Please do not remove the Claims Advice Form out of this document. Rather photocopy the form and send the copy to the Employers Insurance Brokers).
- h) The Employer and the employers Insurance brokers / Insurers or their appointed loss adjusters shall have the right to make all and any enquiry's on the Site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall co-operate in carrying out such enquiry's.
- i) The Contractor, Project Managers and Consultants must allow free access to Insurers' assessors for the purpose of investigating and assessing the loss or damage.





- j) **The Contractor must not proceed with the making good any off the loss without the prior authorisation of the Insurers.**
- k) The Contractor must keep separate records of the costs involved in making good any loss or damage and these records should be available at all times for inspection by Insurers. Such records should include inter alia the entire cost of labour, materials, transport and equipment.
- l) Where required by the Employer, negotiate the settlement of claims with the Insurer or their appointed loss adjusters through the Employer's Insurance Brokers and shall obtain the Employer's approval of such settlement.
- m) Once the amount of a claim is agreed by the Insurers and the Contractor, an "Agreement of Loss" form must be signed by the Contractor and if required this shall be counter signed by the Employer or the Project Managers.
- n) The proceeds of such claim will, if required by the Employer, be paid net of any Deductible applicable under the policy by the Insurers to the Employer who on receipt thereof will arrange for payment to be made in terms of the Conditions of Contract. In the event that it is agreed by the Employer that such claims payment be made directly to the Contractor, the Contractor shall arrange for the Employer to endorse the "Agreement of Loss" to this effect.

## 2. Insurance Effected by the Contractor.

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

j) **Miscellaneous Insurance**

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

- 2.2 The insurances to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance/defects liability period). The Contractor shall within twenty eight (28) days of commencement of the contract produce to the Employer the relevant Policy or Policies of Insurance.



- 2.3 In the event that the Contractor or his Sub-contractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the Employer in writing of such cancellation or restriction and shall advise what action the Contractor or his Sub-contractor will take to remedy such action.

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

2.4 **Sub-Contractors.**

The Contractor shall:

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



Insurance APPENDIX A

**CONTRACTORS CLAIMS ADVICE FORM - FOR ACSA INSURED CONTRACTS UNDER THE ANNUAL POLICY**

Send to : Airports Company South Africa

E-Mail The Following People :

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

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

\* .....  
.....  
.....  
.....  
.....  
.....

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

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

Date of loss : \_\_\_\_\_

Reported to site agent by : \_\_\_\_\_ Date : \_\_\_\_\_

Reported to Insurance Broker by : \_\_\_\_\_ Date : \_\_\_\_\_

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

How did the loss occur (cause) ? \_\_\_\_\_

Details and nature of loss or damage to Contract Works \_\_\_\_\_

Details of other property damaged \_\_\_\_\_

Names and address of witnesses \_\_\_\_\_

Estimated cost of repairs (Separate records of all costs must be kept) R\_\_\_\_\_

Person whom assessor should contact \_\_\_\_\_

Telephone/Mobile Numbers Of Contact Person \_\_\_\_\_

Email Address of Contact Person \_\_\_\_\_

## C1.2 Contract Data

### C1.2b - Data provided by the *Contractor*

#### Notes to a tendering contractor:

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

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

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

<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see [www.ecs.co.za](http://www.ecs.co.za)



	Qualifications: Experience:	<b>CV's (and further key persons data including CVs) are appended to Tender Schedule entitled</b> .
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
<b>B</b>	<b>Priced contract with bill of quantities</b>	
11.2(20)	The <i>Priced BOQ</i> is in	
11.2(30)	The tendered total of the Prices is	<b>(in figures)</b> <b>(in words), excluding VAT</b>

## C1.3 Occupational Health And Safety Agreement

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

#### **OBJECTIVES**

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

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

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

The parties to this Agreement are:

- Hereinafter referred to as “Client”
- Hereinafter referred to as “the Mandatory/ Principal Contractor”

#### **MANDATORY’S MAIN SCOPE OF WORK**

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



**The Mandatary undertakes to comply with:**

**INSURANCE**

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

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

1. All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.
2. The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHSAct 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatary shall ensure that he/she familiarize himself/herself with the requirements of the OHSAct 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatary shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
5. The Mandatary shall appoint competent persons who shall be trained on any Occupational Health & Safety aspect pertaining to them or to the work that is to be performed.
6. The Mandatary shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
7. Any personal protective equipment required shall be issued by the Mandatary to his/her employees and shall be worn at all times.
8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
9. No unsafe equipment/machinery and/or articles shall be used by the Mandatary or contractor on the Client's premises.
10. All incidents/accidents referred to in OHSAct shall be reported by the Mandatary to the Provincial Director: Department of Labour as well as to the Client.





- 11. No user shall be made by the Mandatary and/or their employees and or their subcontractors of any of the Client’s machinery/article/substance/plant/personal protective equipment without prior written approval.
- 12. The Mandatary shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duly completed approved permit.
- 13. The Mandatary shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client’s premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
- 14. Full participation by the Mandatary shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.

**FURTHER UNDERTAKING**

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

**ACCEPTANCE BY MANDATARY**

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

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

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

Expiry date .....

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

SIGNATURE ON BEHALF OF THE CLIENT      DATE  
AIRPORT COMPANY SOUTH AFRICA

## PART C2: PRICING DATA

<b>Document reference</b>	<b>Title</b>
C2.1	Pricing Instructions: Option B
C2.2	The bill of quantities

## C2.1 Pricing Instructions: Option B

### 1. The conditions of contract

#### 1.1. How work is priced and assessed for payment

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

<b>Identified and defined terms</b>	11	(21) The Bill of Quantities is the bill of quantities as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.
	11.2	(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.
		(28) The Price for Work Done to Date is the total of  the quantity of the work which the Contractor has completed for each item in the Bill of Quantities multiplied by the rate and  a proportion of each lump sum which is the proportion of the work covered by the item which the Contractor has completed.  Completed work is work without Defects which would either delay or be covered by immediately following work.
		(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities

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

### 2. Function of the Bill of Quantities

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

#### 2.1. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract (June 2005) Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.



Historically bill of quantities based contracts in South Africa have been influenced by the different approaches of the civil engineering and building sectors of the industry through their respective discipline based standard forms of contract and methods of measurement. This is particularly apparent in the approach to the Preliminary and General bill. On the other hand, because ECC caters for a number of disciplines in the same contract, including electrical works, a different approach not currently found in local methods of measurement to the Preliminary & General bill items may have been used.

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

### 3. **Measurement and payment**

#### 3.1. **Symbols**

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

<b>Abbreviation</b>	<b>Unit</b>
%	Percent
h	Hour
ha	Hectare
kg	Kilogram
kl	Kilolitre
km	Kilometre
km-pass	kilometre-pass
kPa	Kilopascal
kW	Kilowatt
l	Litre
m	Metre
mm	Millimetre
m <sup>2</sup>	square metre
m <sup>2</sup> -pass	square metre pass
m <sup>3</sup>	cubic metre
m <sup>3</sup> -km	cubic metre-kilometre
MN	Meganewton
MN.m	meganewton-metre
MPa	Megapascal
No.	Number
Prov sum <sup>1</sup>	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1 000 kg)
W/day	Work day

<sup>1</sup> Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary. This is because tenderers cannot programme effectively for unknown scopes of work

## 3.2. General assumptions

- 1.1.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 1.1.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 1.1.3. Clause 63.13 in Option B provides that these rates and Prices may be used as a basis for assessment of compensation events instead of Defined Cost.
- 1.1.4. Where this contract requires detailed drawings, designs or other information to be provided, and no rates or prices are included in the *bill* specifically for such matters, then the *Contractor* is deemed to have allowed for all costs associated with such requirements within the tendered rates and Prices in the Bill of Quantities.
- 1.1.5. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*. If a number of items are grouped together for pricing purposes, this will be treated as a single lump sum.
- 1.1.6. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due and not the quantities given in the Bill of Quantities.
- 1.1.7. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. More detail regarding the extent of the work entailed under each item is provided in the Works Information.

## 3.3. Amplification of or assumptions about measurement items

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

## **C2.2 THE BILL OF QUANTITIES**

Records the contractor's prices for providing engineering and construction works which are described in a specification within the Scope of Work section of the contract.

The Contractor shall be paid as follows:

- Payment to the contractor to accommodate Part/Full Occupational qualification (Method 1), Trade qualifications learners (Method 2), Work Integrated Learners for Stipends and Provision for Additional Costs.
- Based on the agreed skills methods, the employer shall make provision for payment to the contractor for learner and candidate stipends for unemployed persons and a provision for additional cost such as medical assessments, personal protective equipment, tools and course fee for example skills programmes, pre trade test training and registration support programmes as indicated in Table 3 in the Standard as provided in the Final Tender Summary section for the CSDG.

### **BOQ Replacement of Navigational Aids Fibre Cable**

#### **BOQ NO1: PRELIMINARY AND GENERAL**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Rate</b>	<b>Total</b>
1,1	Provisional Sum: Airside Induction Training and Airport Permits	sum	R	R 15 000.00
1,2	Project Management and Supervision	sum		
1,3	Site Establishment, site office and storage	sum		
1,4	Safety File: Compliance with the Occupational Health and Safety Act (OHS) and Regulations (including the Construction Regulations, 2014) and Environmental Specifications	sum		
1,5	Insurance (Contract Works, Public Liability and Professional Indemnity etc)	sum		
1,6	Performance bond 10% of the Total	sum		
<b>Sub-Total 1: Carried Forward to Summary</b>				

**BOQ NO2: MATERIAL SUPPLY AND ACCESSORIES**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Rate</b>	<b>Total</b>
2.1	24 core Rodent Proof Optical Fibre cable	km	65	R	R
2.2	Supply standard patch panel for a 24 core fibre optical cable	Each	14		
2.3	Supply standard patch panel for a 12 core fibre optical cable	Each	12		
2.4	Manholes	Each	35		
2.5	Supply Cable sleeves 110mmx6m	Each	15		
2.6	Machinery to drill under 9 x 60m wide taxiway and laying of duct	Sum	1		
2.7	Dome connectors	Sum	1		
2.8	Fibre optic patch cord	Sum	1		
2.9	Fibre optic pig tails	Sum	1		
<b>Sub-Total 2: Carried Forward to Summary</b>					R



**BOQ NO3: INSTALLATION AND COMMISSIONING**

Item	Description	Unit	QTY	Rate	Total
3.1	<b>Provisional Sum:</b> Location and protection of existing underground services and route assessment.	Sum	1	<b>R650 000</b>	<b>R650 000</b>
3.2	<b>Provisional Sum:</b> Issuance of construction drawings and setting out the works with provision GIS coordinates	Sum	1	<b>R950 000</b>	<b>R950 000</b>
3.3	Excavate, laying cable sleeves, back filling and compacting soft soil	Cubic meter	65		
3.4	Installation of manholes	sum	1		
3.5	Fibre installation, splicing and installation of dome connectors	Sum	1		
3.6	Drilling under 9 x 60m wide taxiways	Sum	1		
3.7	Testing and commissioning	Sum	1		
3.8	As-built Documentation	Each	2		
<b>Sub-Total 3: Carried Forward to Summary</b>					R

**SUMMARY PRICING SCHEDULE**

<b>Item</b>	<b>Description</b>	<b>Total</b>
1	<b>Sub-Total 1: Preliminary and General</b>	R
2	<b>Sub-Total 2: Material Supply and Accessories</b>	R
3	<b>Sub-Total 3: Installation and Commissioning</b>	R
4	<b>Total (Sub-total 1 + Sub-total 2 + Sub-total 3)</b>	R
5	<b>Contingencies at 10%</b>	R
6	<b>TOTAL</b> <i>Carry over to Form of Offer and Acceptance</i>	R
7	<b>VAT at 15%</b> <i>Carry over to Form of Offer and Acceptance</i>	R
	<b>GRAND TOTAL</b> <i>Carry over to Form of Offer and Acceptance</i>	R

## O.R. TAMBO INTERNATIONAL AIRPORT

### Abbreviations

ORTIA	O R Tambo International Airport
AWOS	Automated Weather Observation System
ILS	Instrument Landing System
AGL	Airfield Ground Lighting
A-SMGCS	Advanced Surface Movement Guidance and Control System
ATC	Air Traffic Control
ICAO	International Civil Aviation Organization
COC	Certificate of Conformance
dB	decibel
GPa	gigapascal
IEC	International Electrotechnical Commission
ISO	International Organization for Standards
ITU	International Telecommunications Union
MMF	Multi-Mode Fibre
OTDR	Optical Time Domain Reflectometer
FRI	Radio Frequency Interference
UV	Ultraviolet
SMF	Single Mode Fibre
RFN	Receptor Fibre Network
LOC	Localizer
GP	Glide Path

## C3 Scope of Work

### C3.1 DESCRIPTION OF WORK

The project is aimed to ensure availability of communication network required for air navigation systems installed at aerodrome to facilitate safe aircraft movements taxiing during, landing/take offs within the manoeuvring area. The works includes excavation of new fibre routes, supply and installation of rodent proof fibre cable, fibre path panels, leads, splicing and all required accessories for the completion of the works in accordance with industry best practice and governing legislation.

The works will take place within the restricted areas of the National Key Point. O R Tambo International Airport is operational 24 hours and most of the works will need to be carried out at night. The contractor shall comply to all airside rules and regulations.

#### C3.1.1 Objectives

The objective of this project is for the Contractor to Supply, Install, and Commissioning of optical fibre cables and patch panels for AWOS, ILS and AGL. This must be executed successfully inclusive of all other processes and in accordance with the Contract between the Employer and the Contractor ("**the Work**").

#### C3.1.2 Overview of the Work

The Work shall be the replacement of an existing 2x24 core optic fibre cables and installation 2x24 core rodent proof optic fibre cables to connect dedicated navigational instruments across the manoeuvring area. The project comprises of a number of tasks as stated below in no specific order and can be generalised as follows:

- Supply, Installation & Testing of a complete fibre optic network
- Site supervision and management
- Removal of the existing fibre cables.
- Route tracing
- Installation of manholes and provide manhole markers
- Directional bore drilling
- Laying of cable ducts
- Commissioning
- Final acceptance testing.
- As-built documentation
- Familiarisation with the new Fibre Optic Network
- Perform Fusion splicing testing including all terminations with a splice loss of less than 0,03dB and OTDR test.

### C3.1.3 **Extent of the Work**

The scope of Work as outlined here below does not necessarily provide a comprehensive list of all activities and deliverables.

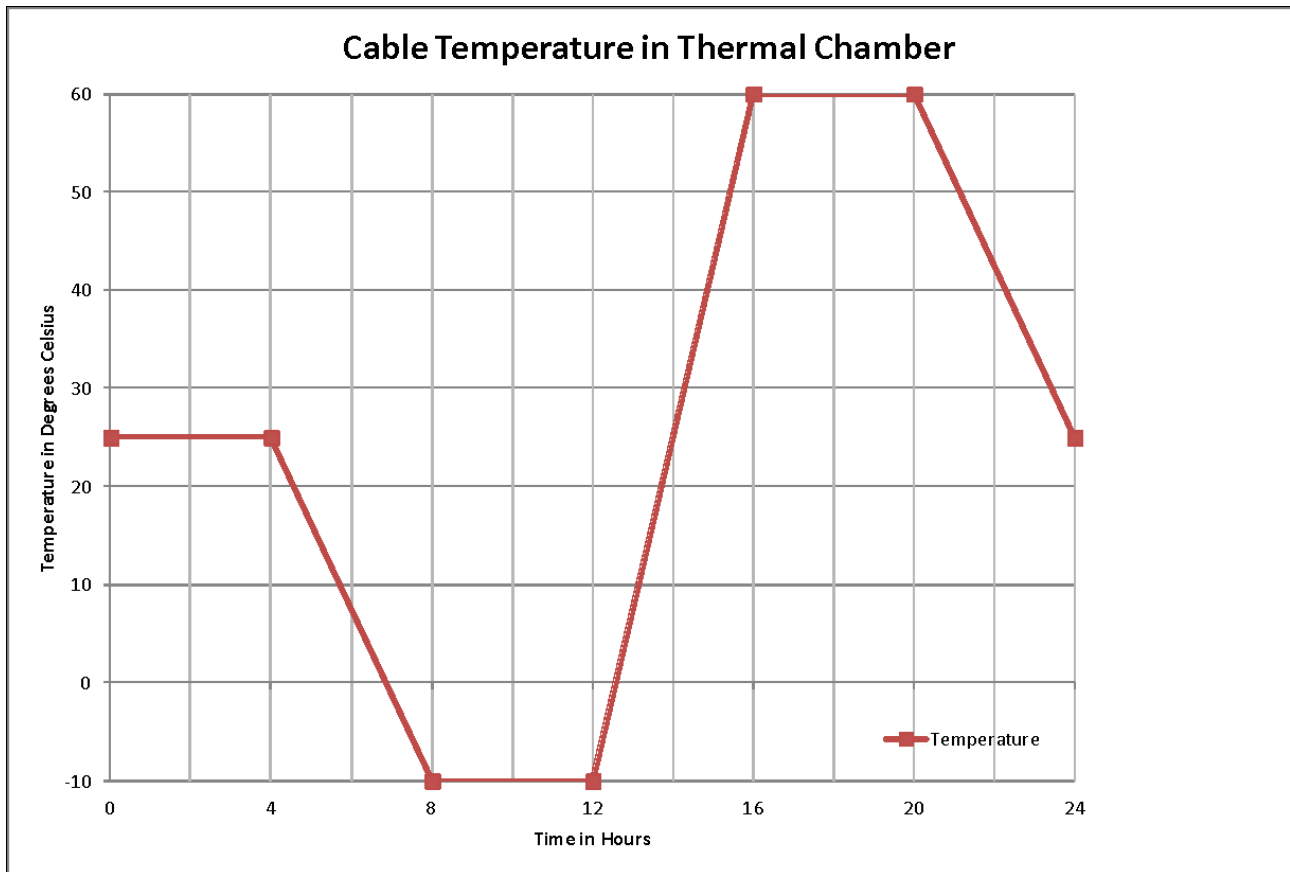
- Supply and installation of a complete fibre optic redundant network which will ensure communication between the following control areas:
  - Substation 03L
  - Substation 21R
  - Substation 03R
  - Substation 21L
  - Substation 15/33
  - New Complex Substation
  - AGL Training Room
  - AGL Control Room
  - ATNS Ground Floor Equipment Room
  - ATNS Upper Equipment Room
  - Tower Roof
  - Fire Tower
  - Localiser and Glidepath shelters for both runway 03L/21R and 03R/21L
- Provision of 24 core patch panel at each location
- Setting out of all work.
- All minor electrical and civil work as may be required.
- All trenching, laying of sleeves, backfilling, building work, etc. to complete the system in every sense.
- All testing as required and will include factory- as well as site tests.
- Removal of all excess rubble from Site daily and ensure that the airport remains safe for operations.
- Provision of as-built information.
- Perform corrective maintenance tasks during the defect's liability period.

#### Optical Fibre Characteristics

The performance and physical characteristics of the optical fibre are described below:

- The fibre type shall be single mode
- The cable attenuation (SMF) shall be less than or equals to 0,35dB at 1310nm and less than or equal to 0,21dB/km at 1550nm.
- The polarization mode dispersion of the SMF shall be less than or equal to 0,1ps/vkm
- The Proof Strain shall be better than or equal to 069GPa.
- The bare fibres inside the cable shall be of a continuous length and shall not contain any midspan splice connections.

- The fibre cable shall be dielectric, and each bundle shall be identifiable by a coloured binder.
- The cable shall be black and UV stabilized.
- The maximum diameter of the cable shall not exceed 5,8mm through its entire length.
- The tube containing the fibre shall be filled with thixotropic gel.
- The cable shall withstand a force of 500N when subjected through a crush resistance test in accordance with IEC 60794-1-2-E3. Attenuation shall be monitored during testing and shall not increase by more than 0,1dB at 1550nm.
- There shall be no visible damage to the fibre cable.
- The cable shall be subjected to an impact resistance tests with an impact energy of 1 Joule in accordance with IEC 607491-1-2-E4. Test shall be repeated 3 times on separate locations of the cable
- The cable shall be subjected to a bending test in accordance with IEC 60794-1-2-E6. The test shall be completed at a bend radius of 20 times the diameter of the cable with a load of 1kg. The test shall be repeated for 35 cycles. The attenuation shall be monitored during the test and the attenuation shall not increase by more than 0.1dB at 1550nm. There shall be no visible damage to the fibre cable.
- The cable shall be subjected to a flexing test in accordance with IEC 60794-1-2-E8. The test shall be completed with pulley A and pulley B diameter of 350 mm and with a load of 2 kg on either end. The test shall be repeated for 60 000 cycles. The attenuation shall be monitored on a regular basis during the test and the attenuation shall not increase by more than 0.1dB at 1550nm. There shall be no visible damage to the fibre cable.
- The cable shall be subjected to a torsion test in accordance with IEC 60794-1-2-E7. The test shall include 10 full cycles with a rotation of  $\pm 180^\circ$  on a 2m sample of cable. The attenuation shall be monitored during the test and the attenuation shall not increase by more than 0.1dB at 1550nm. There shall be no visible damage to the fibre cable.
- The tensile force of the cable shall be tested in accordance with the IEC 60794-1-2-E1. A load of 400N shall be used. The attenuation shall be monitored during the test and the attenuation shall not increase by more than 0.1dB at 1550nm. There shall be no visible damage to the fibre cable.
- The cable shall be subjected to a drip test in accordance with the IEC60794-1-E14. The test shall be completed on a 300mm sample of fibre cable at a temperature of 80°C for a period of 1 hour. After one hour there shall be no leakage of filling compound from the cable.
- The cable shall be subjected to temperature testing in accordance with the IEC60794-1-2-F1. The cable shall be subjected to 2 complete temperature cycles specified in Figure 1 below.



## C3.2 ENGINEERING

### C3.2.1 Design Services and Activity Matrix

The services as stated here attempt to outline only the primary services together with the responsible party.

- Concept, feasibility and overall process – Employer
- Basic engineering and general layouts to tender stage – Employer
- Final detail design and engineering including all equipment, firmware, hardware and software – Contractor
- Drawings for construction - Contractor
- Programming of Work - Contractor
- Setting out of the work in all respects - Contractor
- All testing – Contractor
- Interpretation of test results and provide certification – Contractor
- All as built documentation and drawings – Contractor

### C3.2.2 Employers' Design – Basic System

#### C3.2.2.1 Design Rational

The navigational aids communication consists of a redundant 2x24 core fibre optic cables with dedicated patch panels in each equipment room. This network provides communication for airfield ground lighting, instrument landing systems, automated weather observation systems and ground radar equipment. This network facilitates communication to ensure availability of the system to ensure certification for CAT2

operations. ORTIA is declared a LEVEL 2 operational airport as per ICAO Doc 9157 Advanced Surface Movement Guidance and Controls system, this helps to prevent runway incursions.

#### C3.2.2.2 System Maintainability

Manholes shall be located at least 500m apart to facilitate ease of access during fault finding and splicing, however this will be confirmed by the contractor during while preparing drawings for construction. Each core shall be labelled at each end.

#### C3.2.2.3 Standards

The design and working methods shall conform to all relevant local and international standards and recommended practices, including all amendments. Compliance with the following standards and recommended practices is mandatory. Test certificates, issued by an accredited agency, shall be issued as proof of certifications and/or compliance:

- SACAA – South African Civil Aviation Technical Standards – Aerodromes and Heliports Part 139
- ICAO Annex 14 Aerodromes
- ICAO Aerodrome Design Manuals Doc 9157
- Relevant FAA specifications
- IEC TS Technical Specifications 61827
- Occupational Health A Safety Act, Act 85 of 1993
- SANS 10142 Part 1 and Part 2 Wiring of premises
- ICAO Annex 10 Telecommunications
- SANS 60793-2; Optical fibers. Part 2: Product specifications – General.
- SANS 60793-2-30; Optical fibers Part 2-30: Product specifications - Sectional specification for
  - category A3 multimode fibers.
  - IEC 60794-1-2:2017 Optical fiber cables – part 1-2 Generic Specification – Basic Optical Cable Test Procedures. – General Guidance.



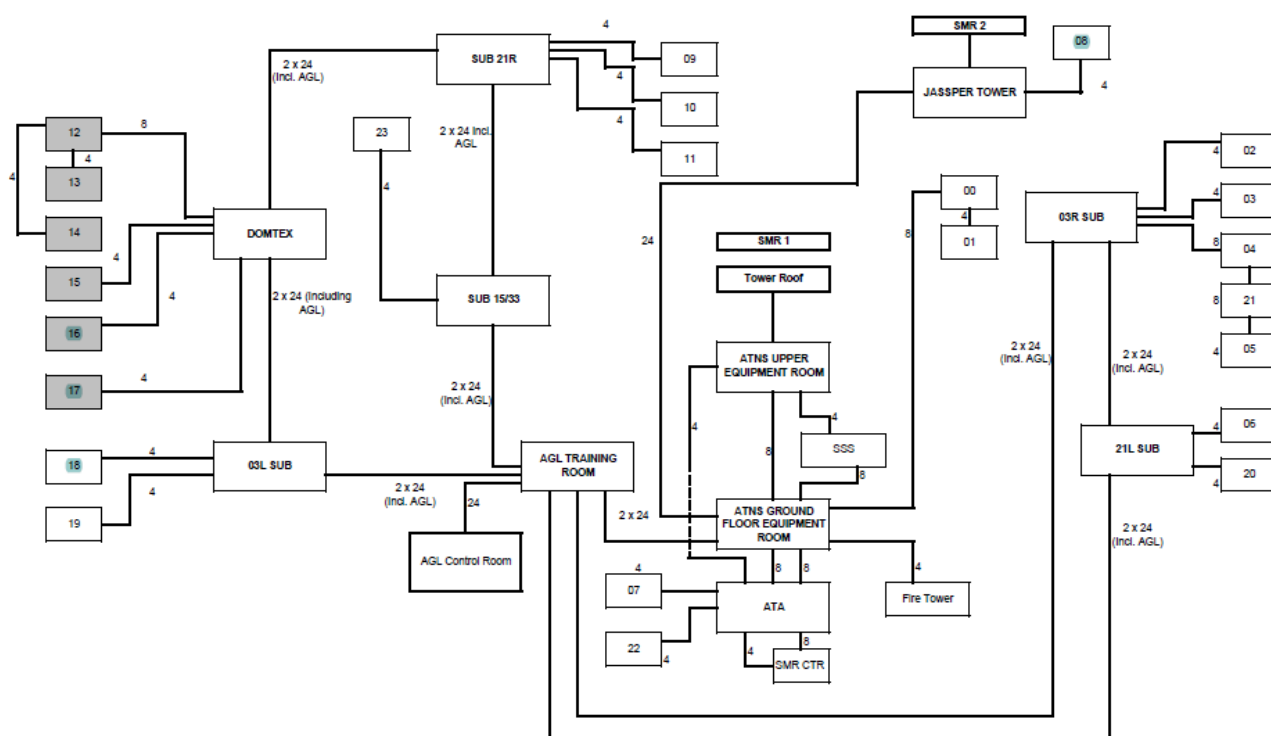
### C3.2.3 Employers' Design – Primary Elements

#### C3.2.3.1 Fibre Optic Communication Network

The optic fibre communication network is a redundant topology network comprising of 2x24 core fibre optic network. The network links all communication equipment located within the manoeuvring area, and it link the following systems:

- Instrument landing systems
- Airfield ground lighting systems
- Automated weather observation systems

The fibre optic cores are terminated at each equipment room through a patch panel. The network layout is shown below:



### **C3.2.4 Employers' Design – Secondary Elements**

#### **C3.2.4.1 Fibre Optic Cable**

The existing fibre optic cables installed are 24 NHD-CST 9/125um, rodent proof fibre cables. Roca manholes are installed and located every 1000m apart. The fibre cables are more than 15 years old, prone to failure. Duplex pigtails and patch leads and two-way dome joints have been installed across the network.

Note that all cables are installed in sleeves, on cable racks/trays or in dedicated concrete trenches. All cables shall be clearly marked in accordance with a system to be agreed by the Engineer.

#### **C.3.2.4.2 Manholes**

Spherical manholes are to be made of pre-cast concrete and shall have a diameter of 1000mm and not be deeper than 500mm. Cable entries into the manholes are provided for by the Contractor. The cover of the manholes is either cast iron reinforced concrete. The total manhole installation shall have the load bearing capacity like what is specified in the FAA L867 specification for bases. The installation level of the manhole is such that it will just be proud of the immediate surroundings.

#### **C3.2.4.3 Sleeves –**

The sleeves have a diameter related to the number of installed cables in the same sleeve and be installed in a trench 500mm below the ground. The sleeves are to be manufactured from HDPE or similar material with a wall thickness of not less than 10mm. The sleeve's connections are specially designed for the application. The trench is to be backfilled and compacted with the excavated material with the provision that no stone having any dimension of more than 75mm. Imported soil may be required to top up areas of sagging.

#### **C3.2.4.4 Drilling under Taxiway/Runway**

The fibre optic communication network crosses underneath 9 taxiways that are 60m in width. Directional bore drilling shall be used to drill underneath at a minimum depth of 1m depending on existing services. The services also run underneath a tunnel linking the Apron A and Apron B, the fibre cable inside the tunnel is mounted on a rack separate from electrical cables. This tunnel provides a link for the AWOS network feeding through new domtex substation and linking the South African Weather.

#### **C3.2.4.5 Site Acceptance Testing**

Insertion loss testing with light source and power meter, or optical loss test shall be performed. No core will be accepted if losses are beyond 3dB/km

#### **C3.2.4.6 Management**

Monthly risk register meeting will be conducted to discuss project related risk, compensation events and overall project progress.

#### C3.2.4.7 Construction Drawings

The Contractor shall prepare drawings for construction and perform surveys/underground scans to identify and protect existing underground services. The prepare drawing for construction identifying all existing services along the proposed route and mark the route on GIS.

#### C3.2.4.8 Project Meetings

Monthly formal site meetings will be held for the duration of the site work, and it shall be expected that the project manager from the Contractor, having adequate decision-making power in respect of planning, change management and project finance will be in attendance. This does not preclude any other meetings that are deemed to be necessary.

#### C3.2.4.9 As-built documentation

The contractor shall supply two hard copies and a dwg format of the as-built drawings. Each core shall be labelled from end to end, and the cables shall be clearly marked in every manhole and patch panel. They also show dimensions, geometry, and locate all the elements of the tasks completed under the contract. The cable route shall be marked on GIS including the location of each manhole. Include layout diagrams, connection and wiring drawings and schematic. Drawings to be detailed and include terminal and wiring numbers for ease of tracing during troubleshooting.

**Part C4: Site Information**

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

**1.1 General description**

The construction site is located on the airside at O.R. Tambo International Airport. This is a restricted area with stringent access control measures put in place. The Contractor is reminded that this is a National Key Point and as such must adhere to all airports rules and regulations regarding health safety, environment, security, fire and access control.

**1.2 Access**

- The Contractor 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 Contractor shall obtain the “gate permit” from the Project Manager before material and equipment are brought and removed from the airside.
- The Contractor 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 Contractor 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 Contractor 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:

<b>Permit</b>	<b>Required by/for</b>	<b>Department</b>
AVOP – Airside Vehicle Operator permit	All drivers of vehicles on airside	ACSA Safety
Airside Vehicle Permit	All vehicles that enter airside	ACSA Safety
Basement Parking Permit	All vehicles allowed to enter the delivery basement	ACSA Parking
Personal Permit	All persons employed on the airport	ACSA Security
Cell Phone Permit	All persons taking cell phones to airside	ACSA Security
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

- 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 on airside is not permitted unless the user is in possession of an appropriate Airport permit for the device.
- Cell phone permit issuing authority lies with the ACSA Security department.
- The Contractor 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 Contractor.

#### **1.5 Hidden and other service on site**

The following services are available on the manoeuvring area:

- 11KV medium voltage electrical cables
- 6.6A/5000V airfield ground lighting primary cables
- Fibre optic communication cables
- Water and storm drainage
- Survey monuments
- Jet fuel lines
- etc

The contractor shall ensure that all existing services are identified and protected prior to any excavation can resume.

## 1.6 Site layout



## **Annex A: Occupational Health and Safety Specifications**

This specification contains comprehensive occupational health and safety specifications.

### **LIST OF ABBREVIATIONS**

ACSA Airports Company South Africa  
GAR General Administration Regulations  
GSR General Safety Regulations  
OHSA Occupational Health and Safety Act 85 of 1993  
OHSS Occupational Health and Safety Specification  
SABS South African Bureau of Standards

## **1. INTRODUCTION**

### **1.1 Purpose of the Occupational Health and Safety Specification**

The purpose of the OHSS is to assist Contractors to achieve compliance with the Occupational Health and Safety law, in order to reduce incidents and injuries. The OHSS will be implemented during the construction of this project or any construction activity that the Employer has control over.

The OHSS is a performance specification to ensure that the Employer and any bodies that enter into formal agreements with the Employer viz. Agents, Consultants and Contractors achieve an acceptable level of OHS performance. No advice, approval of any document required by the OHSS such as hazard identification and risk assessment action plan or any other form of communication from the Employer shall be construed as an acceptance by the Employer of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements. Further, there is no acceptance of liability by the Employer which may result from the Contractor failing to comply with the OHSS, i.e. the Contractor remains responsible for achieving the required performance levels.

### **1.2 Implementation of the Occupational Health and Safety Specification**

This OHSS forms an integral part of the Contract, and Contractors are required to make it an integral part of their Contracts with Sub-Contractors and Suppliers. It will be disseminated by the Employer to persons responsible for the design of the infrastructure works, who will ensure that it is included in the Tender Document(s) issued to prospective Contractors. The prospective Contractors shall incorporate the requirements of the OHSS in their submission of tenders to the Employer.

This specification must be read in conjunction with the OHS Act No 85 of 1993 (as amended), the Regulations as published in Government Gazette No 37305 of 7 February 2014 as well as the General Safety Regulations published in Government Notice No. R 1031 of 30 May 1986, as amended.

The OHS Act Agreement in this document (Returnable Schedules) must be fully completed by the Contractor.

## **2. STANDARD OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION**

### **2.1 Scope**

This OHSS covers the requirements for eliminating and mitigating incidents and injuries in all Employer controlled projects.

The scope also addresses legal compliance, hazard identification and risk control, promoting a health and safety culture amongst those working on ACSA projects and those affected by the activities taking place in and around them.

### **2.2 Interpretations**

#### **2.2.1 Application**

The OHSS contains clauses that are generally applicable to building / construction and that impose pro-active controls associated with activities that impact on human health and safety as they relate to plant and machinery.

Compliance to the requirements of the OHSA, Construction regulations and General Safety Regulations is in addition to the requirements of the OHSS and is part of the Contractor's responsibility. The Employer will through the Agents, as appointed, monitor that the Contractor complies with the requirements of the OHSA and will not prescribe to the Contractor how such compliance is achieved.

#### **Definitions**

- The definitions used will be those set out in the Regulation Gazette No 37305 of 7 February 2014 with the following addition:
- ACSA: Airports Company South Africa
- Hazard Identification and Risk Assessment and Risk Control: Means a documented plan, which identifies hazards, assesses the risks and details the control measures and safe working procedures which are to be used to mitigate and control the occurrence of hazards and risks during construction or operation phases.
- Health and Safety Management Plan: Means a documented plan which addresses the hazards identified and include safe working procedures to mitigate, reduce or control the hazards identified.
- Induction Training: Means once off introductory training on general health and safety issues given to all employees before commencement of work on site.
- Risk: Means the probability or likelihood that a hazard can result in injury or damage.
- Site: Means the area in the possession of the Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Contractor, and approved for such use by the Engineer.

The Act:

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and Regulations promulgated there under.

Contractor: The Contractor terminology used in these specifications shall be deemed to cover Principal Contractor, Contractors and Subcontractors.

## **4. REQUIREMENTS AT TENDER STAGE**

The Contractor shall make available the following with his completed tender:

A Preliminary Health and Safety Plan as described in Regulation 7 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2014 and this specification and will be subject to approval by the Employer. This will include a Hazard Identification and Risk Assessment appropriate to the project, expansion of Annexure D, and a declaration to the effect that he has the competence, completion of Occupational Health and Safety Questionnaire, and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014.

Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor is not able to carry out the work under the contract safely in accordance with the Construction Regulations and may result in the tender being disqualified.



## **5. NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK**

Prior to the commencement of construction work but not later than 7 days after the award of the contract, the Contractor shall, in terms of Regulation 4, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

- the demolition of structures and dismantling of fixed plant of height of 3,0 m or more;
- the use of explosives;
- construction work that will exceed 30 days or 300 person-days;
- excavation work deeper than 1,0 m; or
- working at a height greater than 3,0 m above ground or landings.

The notification must be done in the form of the pro forma included under Returnable Schedules (The Occupational Health and Safety Act) of the tender document. See Annexure A for a copy of the notification.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

## **5. GUIDELINES FOR THE DEVELOPMENT OF A HEALTH & SAFETY PLAN**

### **5.01 Background**

In terms of the Construction Regulations [Regulation 5(1)(b)] of the Occupational Health and Safety Act, No 85 of 1993, the Client is required to compile an Occupational Health and Safety specification for each of its projects and the Contractor, appointed by the Client in terms of Regulation 5(1)(k), is required to prepare an Occupational Health and Safety Plan. This plan has to be prepared in terms of Regulation 7(1)(a) as well as the Client's Occupational Health & Safety Specification. In terms of Regulation 5(1)(l), the Client and the Contractor are required to agree on the Occupational Health and Safety Plan before any work may commence.

### **5.02 Framework for an Occupational Health and Safety Plan**

#### **5.02.1 Introduction**

The Contractor must demonstrate to the Client that he has a suitable and sufficiently documented Occupational Health and Safety Plan as well as the necessary competencies, experience and resources to perform the construction work safely. The Contractor is required to submit, the following documentation for perusal and verification by the Client:

- Management Structure including an organogram – Tender Stage
- Quality Plan – Tender Stage
- Human Resources Plan – Tender Stage
- Registered Workplace Skills Plan
- "Letter of good standing" from the Compensation
- Commissioner or licensed compensation insurer – Tender Stage
- Proof of induction and other training of employees
- Example copies of minutes of previous Occupational Health and Safety Committee meetings and copies of Incident Investigation Reports

#### **5.02.2 Contents of an Occupational Health and Safety Plan**

The Occupational Health and Safety Plan shall include the following:

##### **5.02.2.1 Occupational Health and Safety Management Programme**

- Management of Occupational Health and Safety risks
- Occupational Health and Safety structures and appointments
- Programme of Occupational Health and Safety inspections
- Occupational Health and Safety Representatives
- Occupational Health and Safety committee

### 5.02.2.2 Statement Regarding the Communication and Management of the Work

- Management structure and responsibilities
- Occupational Health and Safety objectives for the project and arrangements for monitoring and review of Occupational Health and Safety performance
- Arrangements for regular liaison between parties on site
- Consultation with the workforce
- The exchange of design information between the Client, Engineer, supervisors and subcontractors on site
- Handling design changes during the project
- Selection and control of subcontractors
- The exchange of Occupational Health and Safety information between all subcontractors
- Security
- Site induction and onsite training
- Facilities and first-aid
- The reporting and investigation of accidents and incidents
- The production and approval of risk assessments and method statements
- Site Occupational Health and Safety rules
- Fire and emergency procedures
- Reporting to the Client i.e. results of Occupational Health and Safety inspections.
- Incident investigations and committee meetings
- Reporting of incidents to the Department of Labour and Compensation Commissioner where appropriate

## 6: PROJECT / SITE SPECIFIC REQUIREMENTS

A list of activities and considerations that have been identified for the project and the construction site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Contractor is given in Annexure D. This list is not to be considered as inclusive and other items must be added as required. In addition, the following health risks should be taken into account. It may become necessary to include others according to the requirements of the project.

### Health risks

- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Exposure to hazardous substances and chemicals used on site.

### Emergency Procedures

The Principal Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following key elements:

- List of key competent personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the specific types of emergencies;
- Information on hazardous material/situations.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, bomb threats, major incidents/accidents, etc. The Contractor shall advise the Client, Agent, Engineer and all relevant authorities forthwith, of any emergencies, together with a record of action taken. This shall be confirmed in writing as soon as possible after the incident. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel. These procedures shall form part of the Health and Safety Plan.

### **First Aid Boxes and First Aid Equipment**

The Contractor shall appoint in writing First Aider(s). If not already accredited, the appointed First Aider(s) are to be sent for accredited first aid training. Valid certificates are to be kept on site. The Contractor shall provide an on-site First Aid Station with first aid facilities, including first aid boxes containing, at least, the requirements of the Annexure to Section 3 of the General Safety Regulations. All Contractors with more than five (5) employees shall supply their own first aid box. Contractors with more than ten (10) employees shall have a trained and certified First Aider on site at all times.

### **Personal Protective Equipment (PPE) and Clothing**

The Contractor shall ensure that all workers are issued with and shall wear hard hats, protective footwear and overalls as well as any other necessary PPE as set out in Section 2.3 of the General Safety Regulations. Contractors are encouraged to provide reflective vests for all their staff. The Contractor and all Contractors shall make provision and keep adequate quantities of SABS always approved PPE on site. This shall include necessary safety gear for visitors. The Contractor shall clearly outline procedures to be taken when PPE or Clothing is:

- Lost or stolen;
- Worn out or damaged.
- Issued to temporary labour or staff.

The above procedure applies to Contractors and their Sub-contractors, as they are all Employers in their own right.

### **Occupational Health and Safety Signage**

The Contractor shall provide adequate on-site OHS signage. This should include but is not limited to: 'no unauthorised entry', 'report to site office', 'site office', 'beware of overhead work', 'hard hat area'. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations. These signs shall be in accordance with the requirements of the General Safety Regulations as amended.

### **8: HEALTH AND SAFETY FILE**

The Contractor shall in terms of Construction Regulation 7(1)(b) always maintain a Health and Safety File on site. The Health and Safety File is a file or other permanent record containing information on aspects of the construction project - which will be necessary to ensure the health and safety of any person who may be affected by the construction work.

The Contractor shall ensure that all other contractors open similar files in accordance with the Regulations. The Contractor shall appoint a suitably qualified person to prepare the Health and Safety File and to keep it up to date for the duration of the contract. The Health and Safety file shall include at least the following information:

All Documents as required by the Act and Regulations

All reports of inspections and audits

All non-conformity reports

All working drawings, calculations and design where applicable

Detailed list of sub-contractors with contact details

List of all hazardous materials used and stored on site with Data Sheets and Materials Hazard Data sheets

All Hazard Identification and Risk Assessments carried out for the project

All Health and Safety Plans for the project.

All method statements

Minutes of all relevant meetings

Incident records, including investigations and results

Record of all appointments under the Regulations

Annexure B is a list of the records to be kept on site.

The Health & Safety File shall be handed over to the Client on completion of the contract. It must contain all the documentation as set out above, or as instructed, as well as any handed to the Contractor by any contractors together with a record of all drawings, designs, materials used and other similar information concerning the completed project.

### **9: RISK ASSESSMENT**

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

Risk is a measure of the likelihood that the harm from a particular hazard will be realised, taking into account the possible severity of the harm. Harm to people includes death, injury (permanent or temporary), physical or mental health or any combination thereof. Risk management in health and safety includes the identification of hazards, assessing risks, taking action to eliminate or reduce the risk, monitoring the effectiveness and performing regular reviews of the entire process. The Principal Contractor shall compile method statements to address or handle the following:

- Hazards particulars to the contract
- Identify what could go wrong and how
- Identify the likelihood of this happening
- Identify the persons at risk
- Identify the extent of possible harm
- Eliminating or reducing this risk
- A monitoring plan
- A review plan

Contractors must ensure that all subcontractors conduct risk assessments for their scope of work as well. All risk assessments shall be updated and re-evaluated with any extra works or with any change to the scope of the works.

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

#### **10: ARRANGEMENTS FOR MONITORING AND REVIEW**

The Client and/or Agent will conduct a Monthly, or at greater frequency, Audit to audit compliance with Construction Regulation 5(1)(n) and (o) to ensure that the Contractor has implemented and is maintaining the agreed and approved OH&S Plan. Annexure C will be used as format when conducting the audit.

**The Client reserves the right to conduct other ad hoc audits and inspections as deemed necessary.**

A representative of the Contractor must accompany the Client on all audits and inspections and may conduct his own audit/inspection at the same time. Each party will, however, take responsibility for the results of his own audit/inspection results.

#### **11: MEASUREMENT AND PAYMENT**

In tendering rates for these items the Contractor shall ensure that the sum of the amounts of the four items shall not be less than 1% of the Work Value of the Tender (Total: Schedule A).

##### **Item Unit**

**Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations** ..... lump sum

The full amount will be paid in one instalment only once:-

- (a) The Contractor has notified the Provincial Director of the Department of Labour in writing of the project.
- (b) The Contractor has made the required initial Appointments of Employees and Sub-Contractors.
- (c) The Client has approved the Contractor's Health and Safety Plan.
- (d) The Contractor has set up his Health and Safety File.

## **Annex B: 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 cognisance 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 Principle Agent.

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

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

The Principle Agent/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 Principle Agent, 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 Principle Agent. 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 Consulting Engineer/ Contractor must upon removing it from airside use, remove and return the Airside Vehicle Permit to the airport manager.

The Consulting 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 immobilised on movement areas.

Plant, equipment and personnel of the Consulting 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 Principle Agent/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 immobilised 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 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 what so ever 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 Contractor is found lacking in any of the security measures or requirements, it will be sufficient 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 Principle Agent, the Employer has the right to amend the working schedule in aid of safety. The PA also retains the right to suspend all works until the Contractor, in the opinion of the PA, 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 during daytime. If, due to airport requirements, certain aspects of the work have to be done during night time, 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 PA 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 PA 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) recognises 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 minimise these impacts as far as possible.

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

## ANNEX C: ACSA Construction Environment Management Plan – EMS 050

### 1. Background

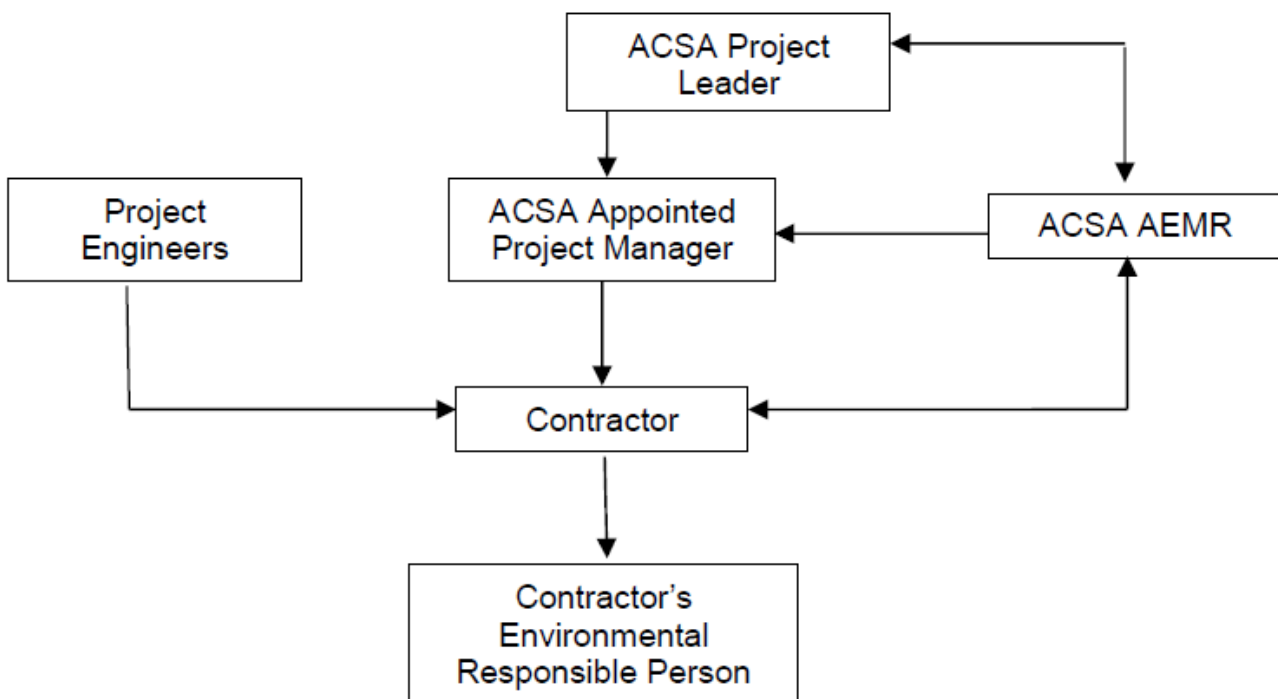
The purpose of this Environmental Management Plan (EMP) is to co-ordinate mitigation, rehabilitation, and monitoring measures of construction projects at ACSA airports such that environmental pollution and risks are minimized as far as possible.

This EMP is provided to contractors at the tender stage to ensure all costs associated with this EMP can be appropriately costed.

### 2. Organisational Structure

It is essential that an organisational structure is established early in the construction phase of the project and that all parties concerned accept the structure. This identifies the responsibilities and the authority of the ACSA Project Leader, design team, Project Manager (PM), consulting engineers and the numerous contractors and sub-contractors.

Responsibility for the application of the construction phase EMP for the project starts with ACSA's Project Leader. The ACSA Project Leader will devolve this responsibility to the designated and appointed Project Manager to assume this task within his or her portfolio, who will in turn issue conformance instructions to the Contractor(s). The Contractor(s) will appoint an Environmental Responsible Person who will ensure that the requirements of the EMP are implemented by monitoring and auditing the performance of the Contractor. ACSA's AEMR (Airport Environmental Management Representative) shall play an oversight role and report on overall EMP compliance to the ACSA Project Leader.



#### 1.1 ACSA project leader

This is an ACSA employee ultimately responsible for the overall success of a project. This person could be within the Commercial, Maintenance & Engineering, Projects or Airport Planning Department.

#### 1.2 Project Manager (PM)

The PM is responsible for ensuring that on-site activities are undertaken in accordance with the requirements of the EMP. The PM will thus need to ensure that:

- This EMP is included in the contracted agreements issued to the contractor(s)
- Environmental Method statements requested by ACSA's AEMR are provided prior to construction
- Corrective action is implemented as required
- Appropriate records and information regarding compliance with the EMP requirements are maintained and made available to the AEMR
- Instructions as required by the AEMR are issued to the relevant contractor

### 1.3 Contractor

- The Contractor shall ensure that all employees, sub-contractors, suppliers, etc. are fully aware of and comply with the environmental issues and requirements detailed in this EMP
  - The Contractor shall liaise closely with their Environmental Responsible Person and PM and will ensure that works on site are conducted in accordance with this EMP
  - The Contractor is to have a copy of the EMP on site and be familiar with its contents
  - The Contractor must ensure that all employees (permanent and temporary) and all sub-contractors that work on the site for longer than two days, receive Environmental Awareness Training prior to commencing work on site
  - The Contractor shall appoint an Environmental Responsible Person in writing, and will forward this appointment to ACSA's AEMR
  - Prior to construction commencement, the Contractor shall draft and submit written environmental method statements to ACSA's AEMR for approval, covering those activities which are identified (in this document and/or by the AEMR), as being potentially harmful to the environment
- Environmental Method Statements indicate how compliance shall be achieved and environmental risk will be mitigated. The environmental method statement shall state clearly:
- Timing of activities
  - Materials to be used
  - Equipment and staffing requirements
  - The proposed construction procedure designed to implement the relevant environmental specifications
  - The system to be implemented to ensure compliance with the above; and
  - Other information deemed necessary by the AEMR and Environmental Responsible Person.

Method statements shall be submitted at least five working days prior to expected commencement of work on an activity, to allow the AEMR time to study and approve the method statement. The contractor shall not commence work on that activity until such time as the method statement has been approved in writing by the AEMR.

Due to changing circumstances, it may be necessary to modify method statements. In such cases, the proposed modifications must be indicated and agreed upon in writing between the AEMR and Environmental Responsible Person. The AEMR and Environmental Responsible Person must retain records of any amendments and ensure that the most current version of any method statement is being used.

## 2.4 Contractor's Environmental Responsible Person

The Contractor shall appoint / designate an environmental responsible person to liaise with ACSA's AEMR and ensure that the requirements set out in this EMP are implemented. The Environmental Responsible Person shall:

- Develop a system to ensure that the EMP and Environmental Method Statements are effectively implemented;
- Audit this system so that he/she can demonstrate to the AEMR that the EMP and Environmental Method Statements are being effectively implemented;
- Ensure that Contractors staff, sub-contractors, suppliers etc. are aware of their requirements in terms of the EMP and that they adhere to the EMP.
- Ensure that responsible persons for sub-contractors or sub-contractors are designated to carry out the requirements of the EMP and Environmental Method Statements;
- Have sufficient authority to issue site instructions to the Contractors staff on their site.
- Ensure that the Contractor and his Subcontractors and his employees have received the appropriate environmental awareness training before commencing on site.
- Meet with the Contractor to discuss the implementation of and non-conformances with this document.
- Identify appropriate corrective action if non-compliance occurs or unforeseen environmental issues arise that require environmental management action.
- Keep a register of major incidents (spills, injuries, complaints, legal transgressions, etc.) and other documentation related to the EMP.
- Issue stop orders when required.
- Report to ACSA's AEMR any problems (or complaints) related to conformance with this document which cannot first be resolved in co-operation with the Contractor and/or his Subcontractors.
- Assist in finding environmentally acceptable solutions to construction problems.

## 2.5 ACSA's AEMR shall:

- Request, review and approve environmental method statements from the Contractor.
- Undertake regular inspections (at least monthly, and more frequently at the AEMR's discretion) of the site in order to check for compliance with method statements as well as specifications outlined in this EMP.
- Provide an audit report to the ACSA Project Leader.

## 2. Environmental Specifications

### 2.1 Location of camp and depot

The Contractor's Camp and Materials Storage Area shall be located at a position approved by the AEMR. No site staff other than security personnel shall be housed on site.

The Contractor shall provide water and/or washing facilities at the Contractor's Camp for personnel.

The Contractor's Camp and Materials Storage Area shall be kept neat and tidy and free of litter.

### 2.2 Demarcation of the site & access

It is important that activities are conducted within a limited area to facilitate control and to minimise the impact on the existing natural environment, existing tenants, and other construction activities in the vicinity and public thoroughfares.

The Contractor shall demarcate the boundaries of the site in order to restrict his construction activities to the site. The Contractor shall ensure that all his plant, labour and materials remain within the boundaries of the site. Failure to do so may result in the Contractor being required to fence the boundaries of the site at his own expense to the satisfaction of the AEMR.

Security and access to the site must be controlled at all times.

### 2.3 Traffic control & safety

Traffic control and safety shall be done in accordance with the South African Traffic Safety Manual, with the relevant signs, flagmen, barriers, etc. being provided at the various access points. Traffic control shall be done in co-operation with local traffic officials. All laws and regulations applicable on the public road system are enforceable on the construction site. Due to the activities involved in the construction phase, trucks and other related vehicles will be using the roads leading to the site. These vehicles will need to be roadworthy and abide by the speed limits. The Environmental Management Plan for the construction phase should monitor the impact on current traffic by additional construction vehicles to ensure noise, safety and dust issues are kept to a minimum.

### 2.4 Ablution facilities

The Contractor shall provide the necessary ablation facilities for all his personnel.

Chemical toilets shall be provided, with a minimum of one toilet per 15 persons. Toilets shall be easily accessible and shall be transportable. The toilets shall be secured to prevent them from blowing over, and shall be provided with an external closing mechanism to prevent toilet paper from being blown out. Toilet paper dispensers shall be provided in all toilets. Toilets shall be cleaned and serviced regularly by a reputable toilet servicing company. Toilets shall be emptied before long weekends and builders' holidays.

The Contractor shall ensure that chemicals and/or waste from toilet cleaning operations are not spilled on the ground at any time. Should there be repeated spillage of chemicals and/or waste (i.e. more than three incidents), the Contractor shall be required to place the toilets on a solid base with a sump at his own expense. Accumulations of chemicals and waste will have to be removed from the site and disposed at an approved waste disposal site or sewage plant.

Abluting anywhere other than in the toilets shall not be permitted. Repeated use of the veld or other areas for ablation purposes (i.e. more than three incidents) may result in the guilty party being given a spot fine. The Contractor shall also be responsible for cleaning up any waste deposited by his personnel.

### 2.5 Domestic waste water

Wastewater from any other ablation or kitchen facilities on site shall be discharged into a suitable conservancy tank. The Contractor shall be responsible for ensuring that the system continues to operate effectively throughout the project and that the conservancy tank is emptied as required during the project. The Contractor shall employ a suitable qualified sub-contractor or the local authority to empty the conservancy tank.

### 3.6 Environmental training

According to the National Environmental Management Act (107 of 1998), any costs incurred to remedy environmental damage shall be borne by the person responsible for that damage; it is therefore critical that the contractors read and understand the requirements of this document and any succeeding documents pertaining to environmental requirements before construction commences. It is a requirement of the act that everyone takes reasonable measures to ensure that they do not pollute the environment. Reasonable measures include informing and educating employees about the environmental risks of their work and training them to operate in an environmentally acceptable manner.

Training is fundamental to the successful implementation of the EMP. All personnel whose work may result in an impact on the environment must receive appropriate training in the environmental procedures to be followed. In this regard, the following must be fulfilled:

- All personnel working on the construction site must attend an environmental awareness training workshop conducted by the Environmental Responsible Person prior to commencing work on site. The purpose of the workshop is to provide staff with the information they require to enable them to meet the requirements of the EMP. The Environmental Responsible Person may call upon the services of a specialist environmental education translator should this be required. Contractors, sub-contractors and all their staff must attend.

- The Environmental Responsible Person shall keep a register of all personnel attending the environmental awareness training workshops; attendance records must be filed and available on site.
- All staff must be trained in emergency response procedures; attendance records must be filed and available on site.
- Environmental awareness posters are to be displayed on site. Environmental 'do's and don'ts' must be clearly illustrated. The posters shall use pictures to convey the intended message and any explanatory text will be in English and the local dialect.

### 3.7 Solid waste management

Solid waste includes construction debris (e.g. packaging materials, timber, cans etc.) waste and surplus food, food packaging etc.

The Contractor shall institute an on-site waste management system that is acceptable to the AEMR in order to prevent the spread of refuse within and beyond the site. The Contractor is reminded that wind velocities on the construction site can be extremely high.

All waste shall be collected and contained immediately. The Contractor shall institute a weekly clean-up of the site. This daily/weekly clean up shall be for the Contractor's account.

The Contractor shall not dispose of any waste and/or construction debris by burning or burying. The use of waste bins and skips is essential. The bins shall be provided with lids and an external closing mechanism to prevent their contents from blowing out. The Contractor shall ensure that all waste is deposited by his employees in the waste bins for removal by the Contractor. Bins shall not be used for any purposes other than waste collection and shall be emptied on a regular basis. All waste shall be disposed of off-site at approved landfill sites.

Waste generated at the construction camps shall be separated into recyclable and non-recyclable waste, and shall be separated as follows:

- Hazardous waste (including used oil, diesel, petrol tins, paint, bitumen, etc.);
- Recyclable waste (paper, tins, glass);
- General waste; and
- Reusable construction material

Recyclable waste shall be deposited in separate skips/bins and removed off site for recycling. The Contractor may wish to enter into an agreement with the surrounding communities and/or his staff with regard to the collection and sale of recyclable and reusable mater.

Hazardous waste, including waste oil and other chemicals (e.g. paints, solvents) shall be stored in (an) enclosed area(s), and shall be clearly marked. If deemed necessary by the Environmental Responsible Person, the Contractor shall obtain the advice of a specialist waste expert concerning the storage of hazardous waste. Such waste shall be disposed of off-site by a specialist waste contractor, at a licensed hazardous waste disposal site. The Contractor shall keep documentary proof of the safe disposal of all waste, which will be available for audit at all times and will also include the waste type and volume.

The Contractor is advised that spot fines for littering have been included in this document. Offenders found littering will be liable for the spot fine.

### 3.8 Protection of fauna and flora

All fauna and flora (unless alien) within and around the site shall be protected. Birds and animals shall not be caught or killed by any means, including poisoning, trapping, shooting or setting of snares.

### 3.9 Protection of archaeological and palaeontological sites

If any possible palaeontological/archaeological material is found during excavations, the Contractor shall stop work immediately and inform the AEMR. The AEMR will inform the South African Heritage Resource Agency (SAHRA) and arrange for a palaeontologist/archaeologist to inspect, and if necessary excavate, the material, subject to acquiring the requisite permits.

### 3.10 Water pollution prevention & management

The Contractor shall prevent pollution of surface or underground water and shall comply with the Water Act, 36 of 1998, and any other national, provincial and local legislation regarding the prevention of water pollution, including the pollution of groundwater and any wetland on site.

The Contractor must ensure that all reasonable precautions are taken to prevent the pollution of the ground and water resources as a result of site activities. Ground contamination may hinder or prevent the re-establishment of natural vegetation. The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site.

The Contractor shall ensure that no oil, petrol, diesel, etc. is discharged onto the ground. Pumps and other machinery requiring oil, diesel, etc. that is to remain in one position for longer than two days shall be placed on drip trays. The drip trays shall be emptied regularly and the contaminated water disposed of off-site at a facility capable of handling such wastewater. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing, and before long week-ends and holidays.

Stormwater and/or groundwater may accumulate on site during the construction period and there is the potential for this water to be contaminated as a result of construction procedures. The Contractor shall ensure that this water does not become contaminated. Contaminated water (eg. cement washings, waste water from ablution or kitchen facilities etc.) shall be collected in a conservancy tank, removed from the site and disposed of in a manner approved by the AEMR.

### 3.11 Stormwater control

Contractors shall take reasonable measures to prevent erosion resulting from a diversion, restriction or increase in the flow of stormwater caused by the presence of their works, operations and activities. Any stormwater collected in banded areas containing oils, fuels, chemicals or other potentially polluting substances shall be pumped out of the bund, collected in a suitable container and removed from the site for appropriate disposal.

Contractors shall provide adequate control measures to prevent stormwater damage and erosion during construction. Control measures should include the control by sumps and adequate pumping of water ingress into trenches below the water table. Stormwater should also be directed into attenuation ponds wherever possible. All methods of stormwater control during the construction phase are to be agreed and approved by the AEMR.

Berms and existing stormwater drainage systems shall be used to prevent surface run-off from entering site excavations.

### 3.12 Water resource management

Water is a scarce resource and shall be conserved wherever possible. The Contractor shall not waste water (e.g. water areas excessively etc.). All leaking water pipes are to be repaired or replaced immediately. The Contractor shall provide all drinking water and water for construction purposes. Water shall not be used unnecessarily.

### 3.13 Pollution prevention and remediation

The Contractor must ensure that all reasonable precautions are taken to prevent the pollution of the ground and water resources as a result of site activities. Pollution could result from the release, accidental or otherwise, of contaminated runoff from construction camps, discharge of contaminated construction water, chemicals, oils, fuels, sewage, run off from stockpiles, solid waste, litter, etc.

The first activity to be undertaken once a spill occurs is to terminate the source of the spill and contain the polluted area.



All fuel, oil or hydraulic fluid spills are to be reported to the Project Manager/ Engineer, Environmental Responsible Person and AEMR so that appropriate clean-up measures can be implemented.

The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site. Sufficient quantities of suitable hydrocarbon absorbent or remediation materials must be present on site at all times. Absorbent "spill-mop-up" products need to be on hand – Enretech, Spillsorb or Drizit type products should be investigated for these purposes.

Concrete-mixing equipment (mixers and the like) shall not be discharged overland. Such water shall be collected in a conservancy tank, removed from the site and disposed of in the correct manner. The Contractor may consider reusing such water for washing other concrete equipment to minimise the amount required to be removed off site.

The Contractor is advised that cement and concrete are regarded as highly hazardous to the natural environment on account of the very high pH of the material, and the chemicals contained therein. Therefore, the Contractor shall ensure that:

- concrete is mixed on mortar boards, and not directly on the ground;
- the visible remains of concrete, either solid, or from washings, are physically removed immediately and disposed of as waste. Washing the visible signs into the ground is not acceptable; and
- all aggregate is also removed.

### 3.14 Servicing/fuelling of construction equipment

Servicing and fuelling should preferably occur off site.

However, if these activities occur on site, the Contractor shall ensure that all servicing of vehicles and equipment takes place in designated areas agreed upon by the AEMR. All waste shall be collected and disposed of off-site at an appropriately licensed landfill site. All equipment that leaks onto the ground shall be repaired immediately or removed.

Similarly, no vehicles or machines shall be refuelled on site except at designated refuelling locations, unless otherwise agreed with the AEMR. The Contractor shall not change oil or lubricants anywhere on site except at designated locations, except if there is a breakdown or an emergency repair. In such instances, the Contractor shall ensure that he has Drizit pads (or equivalent) and/or drip trays available to collect any oil, fluid, etc.

### 3.15 Fuels and Chemicals

The Contractor shall take all reasonable precautions to prevent the pollution of the ground and/or water resources by fuels and chemicals as a result of his activities.

The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site.

The Contractor shall ensure that no oil, petrol, diesel, etc. is discharged onto the ground. Pumps and other machinery requiring oil, diesel, etc. that is to remain in one position for longer than two days shall be placed on drip trays. The drip trays shall be emptied regularly and the contaminated water disposed of off-site at a facility capable of handling such wastewater. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing, and before long week-ends and holidays.

The Contractor shall remove all oil-, petrol-, and diesel-soaked sand immediately and shall dispose of it as hazardous waste.

Should the Environmental Responsible Person/AEMR and/or the relevant authorities deem it necessary to institute a programme for the removal of contaminated ground resulting from the non-compliance of the controls detailed above, these costs will be for the Contractor's account. Remedial action shall be approved by the AEMR and relevant authorities, if appropriate.

### 3.16 Fuel & Hazardous Materials Storage

Contractors shall identify fuels and hazardous substances to be stored on the site and shall ensure that they know the effects of these substances on their staff and the environment. The Environmental Responsible Person shall keep a copy of a fuels and hazardous substance inventory which shall be available on site.

Contractors shall ensure that the quantities of fuels and chemicals on site are appropriate to the requirements and are stored and handled so as to avoid the risk of spillage. All fuels, oils and chemicals shall be confined

to a specific and secured area. These materials shall be stored in an area with a concrete or other impervious base, which is adequately bunded. The volume of the bund shall be two times the volume of the containers stored. Gas and fuel should not be stored in the same storage area, and any generators used on the site should also be placed on a bunded surface.

The Contractor shall be responsible for securing any permits / certificates that may be required in respect of fuel storage from the local authorities.

In addition, the following must be implemented:

- All fuel stores must be equipped with a fire extinguisher;
- Materials Safety Data Sheets must be available on site and filed accordingly.
- No vehicle servicing may take place on the site. Servicing of equipment that uses hydrocarbon fuels, oils, lubricants and other hazardous chemicals may only take place in the site camp under conditions approved by the AEMR;
- All fuels are to be stored within a lined / demarcated area in the Site Camp. No refuelling is to take place outside of this demarcated area unless authorised by the Environmental Responsible Person. Note that filling machinery in the field (on site) from canisters should be cleared with the Environmental Responsible Person and both a "no leak" funnel / pump and one of the above mentioned absorption products must be on hand in the event of such refuelling taking place.

### 3.17 Dust control

The Contractor shall be responsible for the continued control of dust arising from his operations, through measures including, but not limited to, spraying of water on bare areas, rotovating straw bales into the soil surface and the scheduling of dust-generating activities to times when wind velocity is low. Overhead sprayers shall not be used in windy conditions, because too much water will be lost to evaporation. The use of water carts is preferred.

### 3.18 Noise control

The Contractor shall take all reasonable precautions to minimise noise generated on site as a result of his operations, especially when working in areas or on activities that may impact on neighbouring land users.

The Contractor shall comply with the applicable regulations with regard to noise.

The Environmental Responsible Person and/or AEMR may inform adjacent land users, tenants and communities about the possibility of noise pollution and the approximate duration of the problem.

### 3.19 Emergency procedures

The Contractor shall ensure that emergency procedures are set up prior to commencing work. Emergency procedures shall include, but are not limited to, fire, spills, contamination of the ground, accidents to employees, use of hazardous substances, etc. Emergency procedures, including responsible personnel, contact details of emergency services, etc. shall be made available to all the relevant personnel and shall be clearly demarcated at the relevant locations around the site.

The Environmental Responsible Person shall advise the Contractor, PM and AEMR of any emergencies on site, together with a record of action taken.

### 3.19.1 Fires

The Contractor shall take all the necessary precautions to ensure that fires are not started as a result of his activities on site, and shall also comply with the requirements of the Occupational Health and Safety Act 85 of 1993.

No open fires shall be permitted on or off site. Closed fires or stoves shall only be permitted at designated safe sites in the construction camps. Fires shall also not be permitted near any potential sources of combustion, such as fuel stores, stockpiles of plant material etc.

The Contractor is advised that sparks generated during welding, cutting of metal or gas cutting can cause fires. Every possible precaution shall therefore be taken when working with this equipment near potential sources of combustion. Such precautions include having an approved fire extinguisher immediately available at the site of any such activities.

The Contractor shall be liable for any expenses incurred by any organisations called to assist with fighting fires, and for any costs relating to the rehabilitation of burnt areas.

No smoking will be permitted on the site except for within a designated area in the site camp. Suitable firefighting equipment must be readily available in this area.

The Contractor must ensure that the contact details of the nearest Fire Department are displayed on site (together with other emergency services) and that all persons involved with the project know the location of these numbers on site.

## 4. Site clearance and rehabilitation

### 4.1 Removal of topsoil

Following removal of vegetation from the site, all topsoil shall be removed (up to a maximum of 30 cm depth) and stockpiled for re-use in subsequent rehabilitation and landscaping activities. The stockpiles shall not be higher than 2 m in order to minimise composting. The stockpiles of topsoil shall be located in an area agreed with the AEMR.

### 4.2 Stabilisation of steep slopes

The disturbance of steep slopes, for example by the removal of vegetation, may result in slope instability and erosion by rain and surface run off. The Contractor shall ensure that slopes that are disturbed during construction are stabilised to prevent erosion occurring. Any erosion that does occur must be reinstated at the Contractor's cost.

### 4.3 Rehabilitation

The Contractor shall be responsible for rehabilitating any areas cleared or disturbed for construction purposes that are to be incorporated into open space or buffer zones, as well as all spoiling. The Contractor shall revegetate such areas in accordance with the specification provided below.

The Contractor shall stabilise, by straw rotovation or other, any areas that are cleared or disturbed for construction purposes which are not going to be incorporated into open space or buffer zones (i.e. areas that will be subsequently developed by another party).

All construction equipment and excess aggregate, gravel, stone, concrete, bricks, temporary fencing and the like shall be removed from the site upon completion of the work. No discarded materials of whatsoever nature shall be buried on the site or on any other land not owned by ACSA. **Annexures Part C5 Page | 37**

#### 4.4 Landscaping and preparation for re-vegetation

Areas that require reshaping shall be cut, filled and compacted so as to follow the contours of the surrounding landscape. Topsoil removed from the area initially shall be replaced. Care must be taken not to mix the topsoil with the subsoil during shaping operations. Should a crust form on the soil before revegetation is commenced, the Contractor shall, at his own cost, loosen the crust by scarifying to a depth of 150 mm.

### 5. Management and monitoring

This section focuses on the systems and procedures required to ensure that the environmental specifications are effectively implemented. Emphasis is on monitoring and penalties, aimed at ensuring compliance with this document.

#### 5.1 General inspection monitoring and reporting

The Environmental Responsible Person shall:

- Inspect the site on a daily basis to ensure that the environmental specifications are adhered to.
- Maintain a record of major incidents (spills, impacts, complaints, legal transgressions etc.) as well as corrective and preventive actions taken.
- Conduct regular internal audits (at least weekly) to ensure that the system for implementation of the EMP is operating effectively and keep records of these audits.
- Conduct monthly meetings for the duration of the project.

These will be attended by the Environmental Responsible Person, Contractors Resident Engineers and sub-contractor representatives, and will be minuted and available for audit. The agenda will cover compliance with the EMP and environmental method statements, results of audits, non-compliances and corrective and preventative actions with agreed dates, and environmental queries.

#### 5.2 Penalties

Penalties may be imposed by the AEMR on Contractors who are found to be infringing these specifications. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall determine how to recover the fine from the relevant employee and/or sub-contractor. The Contractor shall also take the necessary steps (e.g. training) to prevent a recurrence of the infringement and shall advise the AEMR accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings the Council, authorities, land owners and/or members of the public may institute against the Contractor. Penalties may range between R200.00 and R20, 000.00, depending upon the severity of the infringement. The decision on how much to impose will be made by the AEMR, and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused as a result of the infringement at his own expense.

A preliminary list of infringements for which penalties will be imposed is as follows:

- Moving outside the demarcated site boundaries;

- Littering of the site and surrounds;
- Burying waste on site and surrounds;
- Smoking in the vicinity of fuel storage and filling areas and in any other areas where flammable materials are stored/used;
- Making fires outside designated areas;
- Defacement of natural features;
- Spillage onto the ground of oil, diesel, etc.;
- Picking/damaging plant material;
- Damaging/killing wild animals; and
- Additional fines as determined by the AEMR and added to this list.

The AEMR may also order the Contractor via the ACSA Project Leader to suspend part or all the works if the Contractor repeatedly causes damage to the environment by not adhering to the EMP. The suspension will be enforced until the offending actions, procedure or equipment is corrected. No extension of time will be granted for such delays and all costs will be borne by the Contractor.

## C4.3 Acsa Environmental Policy

### AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED ENVIRONMENTAL MANAGEMENT POLICY STATEMENT

Airports Company South Africa SOC Limited (ACSA), as a world-class airport operator, acknowledges that airport activities and operations may have diverse impacts on the environment. It therefore accepts its stewardship role of responsible care for the environment in order to reduce its environmental impact. Consequently, ACSA commits to implementing and maintaining an Environmental Management System.

Airports Company South Africa SOC Limited (The Group) is committed to:

- Maintain an Environmental Management System based on the requirements of ISO 14001.
- Conduct regular audits of the system to ensure its adequacy and effectiveness.
- Monitor and measure significant environmental aspects and impacts of airport activities and operations, and provide a framework for the setting and reviewing of environmental objectives and targets.
- Ensure employees, operators, tenants, service providers, contractors and supply chain that fall within the scope of the Environmental Management System are aware of the environmental aspects and impacts associated with their activities and operations, and of the requirements of the Environmental Management System.
- Report its environmental performance indicators in the integrated annual report.
- Continually improve environmental performance.
- Seek opportunities to reduce the impact of aircraft noise by engaging with industry stakeholders.
- Monitor aircraft noise at Cape Town International Airport, King Shaka International Airport and O R Tambo International Airport.
- Actively seeking out opportunities to reduce energy consumption from non-renewable energy sources.
- Measure the carbon footprint at Bram Fischer, Cape Town, King Shaka, O R Tambo and Port Elizabeth International Airports, as well as George Airport, while actively seeking out opportunities to reduce its overall carbon footprint.
- Monitor air quality at Cape Town International Airport, King Shaka International Airport and O R Tambo International Airport.
- Actively seek opportunities to reduce water consumption.
- Avoid the pollution of storm water and/or groundwater as a result of airport operations.
- Ensure that all waste is minimised, or otherwise reduced, re-used and/or recycled.
- Conserve biodiversity where feasible on its property.
- Collaborating with and engaging surrounding communities to seek opportunities to minimise the environmental impact of airport operations on the environment.
- Comply with relevant environmental legislation, associated regulations and other applicable requirements.
- Where Airports Company South Africa SOC Limited does not directly control the impacts at the Corporate Office or at airports, the Group shall work in partnership with operators, contractors, tenants, service providers and supply chain management to improve performance.

The Environmental policy is applicable to Airports Company South Africa SOC Limited infrastructure, and the geographical areas within which the organisation operates its aeronautical and non-aeronautical business. This includes its employees, stakeholders, service providers, and contractors.

The Group's managers and staff acknowledge that the implementation of this Environmental Policy is their responsibility and are committed to it. This policy statement shall be reviewed by Management every three (3) years and made available to any interested parties upon request.

Signed:



Date:

Issue No: 11

05/03/2021

Chief Executive Officer: Airports Company South Africa SOC Limited,

## C4.5.1 Generic Hazard Assessment

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

**Annexure C3 – Generic Hazard assessment**

Generic Hazard	Specific component of Hazard	Hazard consequence related	Existing defences 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	on 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 is to be serviceable. Vehicles are to be checked by Airside Safety prior to be granted Airside access	4A
Driving on airside	on 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 Licence 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 effected 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 licence (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 programme 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 where 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 Height at	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 utilised 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.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 used to transport heavy items in the Parkade	4C