



AIRPORTS COMPANY
SOUTH AFRICA

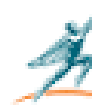
AIRPORTS COMPANY OF SOUTH AFRICA

CONTRACT NO: _____

RETURNABLE

NOTE:

- The Form of Offer and Acceptance (C1.1) is on **pages 3-6** of this document.
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AIRPORTS COMPANY
SOUTH AFRICA

THE CLIENT:

Airports Company South Africa SOC Ltd
OR TAMBO International Airport

Kempton Park
Gauteng, South Africa,
1627

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February 2024

CONSTRUCTION CONTRACT



AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

PROJECT NUMBER: 3652

**TITLE OF PROJECT: APPOINTMENT OF A CONTRACTOR FOR THE
DESIGN, INSTALLATION AND COMMISSION OF THE FIRE
DETECTION AND SUPPRESSION SYSTEM AT
OR TAMBO INTERNATIONAL AIRPORT**

NEC 3: ENGINEERING AND CONSTRUCTION CONTRACT (ECC)

Between AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Applicable at OR TAMBO International Airport

(Registration Number: 1993/004149/30)

and

(Registration Number: _____)

for

Contents:		No of pages
Part C1	Agreements & Contract Data	[26]
Part C2	Pricing Data	[21]
Part C3	Scope of Works	[28]
Part C4	Site Information	[04]



Part C1: Agreements and Contract Data

C1.1: Form of Offer and Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of the DESIGN, INSTALLATION AND COMMISSION OF THE FIRE DETECTION AND SUPPRESSION SYSTEM 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 as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

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

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(in words)..... Rands;

(in figures) R.....

THE OFFERED PRICES ARE AS STATED IN THE PRICING SCHEDULE

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

Signature(s)

Name(s)

Capacity

For the Bidder:

Name & signature of witness (Insert name and address of organisation)

Date

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s) _____

Name(s) _____

Capacity _____

the Employer

(Insert name and address of organisation)



Name
& signature
of witness

Date

.....

Schedule of Deviations

1 Subject

Details

.....

.....

.....

2 Subject

Details

.....

.....

.....

3 Subject

Details

.....

.....

.....



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

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

For the Employer

For the Bidder

Signature (s)	.....	.....
Name (s)	.....	.....
Capacity	.....	.....
Name and Address	Airports Company South Africa SOC Limited	
Name & Signature of witness	<i>(Insert name and address of organisation)</i>	<i>(Insert name and address of organisation)</i>
Date	.....	.....

Part C1.2a Contract Data

Part one – Data provided by the *Employer*

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

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for Main Option	
	Main Option	B: Priced contract with bill of quantities
	Dispute resolution Option	W1: Dispute resolution procedure
	Secondary Options (incorporating amendments)	X2: Changes in the law X7: Delay damages X13: Performance Bond X16: Retention X15: Limitation of contractor's Liability for his design to reasonable skill and care X18: Limitation of liability
		Z: Additional conditions of contract of the NEC3 Engineering and Construction Contract, April 2013
10.1	The <i>Employer</i> is (Name)	Airports Company South Africa SOC Limited,
	Address	Airports Company South Africa SOC Limited OR Tambo International Airport Private Bag X1, Kempton Park, Gauteng, South Africa, 1627
	Telephone	+27 11 921 6911
	Fax	+27 11 390 1012
10.1	The <i>Project Manager</i> is	TBC on appointment of Joint Monitoring Team Project Manager

Contact Person:

Address:

Telephone

E-mail address

10.1	The <i>Supervisor</i> is	TBC on appointment of Contractor
	Address	
	Telephone	
	Fax	
	Email	
11.2	The <i>works</i> are	DESIGN, INSTALLATION AND COMMISSION OF THE FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> • Availability of As Built information • Access to Site • Site Constraints and Constructability • Municipal Approval –Fire Chief Inspector
11.2	The <i>Works Information</i> is in	Part C3 'Scope of Works' section of this contract
11.2	The <i>Site Information</i> is in	Part C4 'Works Information' section of this contract
11.2	The <i>boundary of the site</i> is	As indicated on site layout
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period of reply</i> is	Seven (7) days

3	Time	
31.2	The <i>starting date</i> is	On Issue of Purchase Order
11.2	The <i>completion date</i> is	28 months from contractor appointment date (Purchase Order issue date)
30.1	The <i>access date</i> is	1 month from appointment of contractor (Purchase Order issue date)
31.1	The <i>Contractor</i> submits a first (preliminary) programme with the tender by the tender closing date	(14 days upon appointment)
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	Four (4) weeks
35.1	The <i>Employer</i> is not willing to take over the works before the <i>completion date</i>	The <i>Employer</i> and Others will have access to the <i>works</i> during construction or prior to completion. Such access by the Employer and Others shall not relieve the <i>Contractor</i> from liability for the completion of the <i>works</i> in accordance with the Works Information and in terms of this contract.
4	Testing and Defects	
42.2	The <i>defects date</i> is	Twelve (12) months after Completion of the whole of the <i>works</i>
43.2	The <i>defects correction period</i> is	Two (2) weeks
5	Payment	
50.1	The <i>assessment interval</i> is	Four (4) weeks, on the 25th day of each successive month
50.1	The <i>currency of this contract</i> is the	South African Rand
51.2	The period within which payment is made is	Four (4) weeks
51.4	The <i>interest rate</i> is	The prime lending rate of the Nedbank Bank. as determined from time to time
6	Compensation events	
60.1	The <i>weather measurements</i> to be recorded for each calendar month are	the cumulative rainfall (mm) the number of days with rainfall more than 10 mm the number of days with minimum air temperature less than 0 degrees Celsius
60.1	The place where weather is to be recorded (on the Site) is	At the Construction Site Office and the records to be kept on site in a file clearly marked for this purpose

60.1	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are	Month	Days	Month	Days
		January	1	July	4
		February	1	August	3
		March	2	September	2
		April	2	October	2
		May	3	November	2
		June	3	December	1
7	Title	No data required for this section of the <i>conditions of contract</i>			
8	Risks and Insurance				
84.1	The <i>Employer</i> provides these insurances	Refer to the Insurance Clauses which is attached at the end of the Contract Data			
84.2	The <i>Contractor</i> provides the insurance stated in	The Insurance Clauses which is attached at the end of the Contract Data. The insurances are in the joint names of the Parties and provide cover for events which are at the Contractor's risk from the starting date until the Defects Certificate or a termination certificate has been issued.			
	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract for any one event is:	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993			
9	Termination	No data required for this section of the <i>conditions of contract</i>			
10	Data for Main Options				
A	Priced contract with activity schedule	Tenderer to provide activity schedule with pricing information, based on works description			
11	Data for Option W1				
W1.1	The <i>Adjudicator</i> is	The person appointed jointly by the parties from the list of adjudicators contained below			
W1.2	The <i>Adjudicator nominating body</i> is	The current Chairman of Gauteng Advocate's Bar Council			
W1.4	The <i>tribunal</i> is	Arbitration			
W1.4	If the <i>tribunal</i> is arbitration, the arbitration procedure is	The <i>arbitration procedure</i> is set out in The Rules for the Conduct of Arbitrations 2013 Edition, 7th Edition, published by The Association of Arbitrators, (Southern Africa)			

W1.4	The place where arbitration is to be held is	Gauteng, South Africa.
W1.4	The person or organisation who will choose an arbitrator	The Arbitrator is the person selected by the Parties as and when a dispute arises in terms of the relevant Z Clause, from the Panel of Arbitrators provided under the relevant Z clause if the arbitration procedure does not state who selects an arbitrator. The Arbitrator nominating body is the Chairman of the Johannesburg Advocates Bar Council.
12	Data for Secondary Option Clauses	
X7	Delay Damages	
	Delay damages of the <i>works</i> are	Amount per day is 0.05%, to the maximum of 10% of the Contract value
X13	Performance bond	
X13.1	The amount of the performance bond is	10% of the contract value. Pro-forma draft of a performance bond to be used is attached to this contract.
X16	Retention	
X16.1	The <i>retention percentage</i> is	5% of the Contract value.
X18	Limitation of Liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	The total of the Prices
X18.3	The <i>Contractor's</i> total liability to the Employer for defects due to his design which are not listed on the Defects Certificate is limited to	The total of the Prices

X18.4 The *Contractor's* total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to The *Contractor's* total direct liability to the *Employer* for all matters arising under or in connection with this contract, other than the excluded matters, is limited to the total of the Prices and applies in contract, tort or delict and otherwise to the extent allowed under the law of the contract.

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

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

Z The Additional conditions of Z1 – Z20 contract are

Amendments to the Core Clauses

Z1 Interpretation of the law

Z1.1 Add to core clause 12.3:

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

Z2 Providing the Works:

Z2.1 Delete core clause 20.1 and replace with the following:

The *Contractor* provides the works in accordance with the Works Information and warrants that the results of the Works, when complete, shall be fit for their intended purpose

Z3 Other responsibilities:

Add the following at the end of core clause 27:

Z3.1 The *Contractor* shall have satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information and drawings provided to him as at the Contract Date

Z3.2 The *Contractor* shall be responsible for the correct setting out of the *Works* in accordance with the original points, lines and levels stated in the *Works* Information or notified by the *Project Manager*, *Supervisor* or the *Employer*. Any errors in the positioning of the *Works* shall be rectified by the *Contractor* at the *Contractor's* own costs.

Z4 Extending the defects date:

-
- Add the following as a new core clause 46:**
- Z4.1** If the *Employer* cannot use the *works* due to a Defect, which arises after Completion and before the *defects date*, the *defects date* is delayed by a period equal to that during which the *Employer*, due to a Defect, is unable to use the *works*
- Z4.2** If part of the *works* is replaced due to a Defect arising after Completion and before the *defects date*, the *defects date* for the part of the *works* which is replaced is delayed by a period equal to that between Completion and the date by when the part has been replaced
- Z4.3** The *Project Manager* notifies the *Contractor* of the change to a *defect date* when the delay occurs. The period between Completion and an extended *defects date* does not exceed twice the period between Completion and the *defects date* stated in the Contract Data
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Z5 Termination

- Z5.1** **Add the following to core clause 91.1, at the second main bullet, fifth sub-bullet point, after the words “assets or”:** “business rescue proceedings are initiated or steps are taken to initiate business rescue proceedings”.

Amendment to the Secondary Option Clauses

Z6 Performance Bond

- Z6.1** **Amend the first sentence of clause X13.1 to read as follows:**
The *Contractor* gives the *Employer* an unconditional, on-demand performance bond, provided by a bank which the *Project Manager* and the *Employer* have accepted, for the amount stated in the Contract Data and in the form set out in Annexure C.ii of this Contract Data.
- Z6.2** **Add the following new clause as Option X13.2:**
The *Contractor ensures* that the performance bond is valid and enforceable until the end of the *contract period*. If the terms of the performance bond specify its expiry date and the end of the *contract period* does not coincide with such expiry date, four weeks prior to the said expiry date, the *Contractor* extends the validity of the performance bond until the end of the *contract period*. If the *Contractor* fails to so extend the validity of the performance bond, the *Employer* may claim the full amount of the performance bond and retain the proceeds as cash security

Z7 Limitation of liability:

- Insert the following new clause as Option X18.6:**
- Z7.1** The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00
- Z7.2** Notwithstanding any other clause in this contract, any proceeds received from any insurances or any proceeds which would have been received from any insurances but for the conduct of the *Contractor* shall be excluded from the calculation of the limitations of liability listed in the contract

Additional Z Clauses

Z8 Cession, delegation and assignment

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

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

Z9 Joint and several liability

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

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

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

Z10 Ethics

Z10.1 The *Contractor* undertakes:

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

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

Z10.3 The *Contractor's* breach of this clause constitutes grounds for terminating the *Contractor's* obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.

Z10.4 If the *Contractor* is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices, including but not limited to the making of offers (directly or indirectly), payments, gifts, gratuity, commission or benefits of any kind, which are in any way whatsoever in connection with the contract with the *Employer*, the *Employer* shall be entitled to terminate the contract in accordance with the procedures stated in core clause 92.2. the amount due on termination is A1.

Z11 Confidentiality

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

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

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

- Z12.1** If the *Contractor* defaults by failing to comply with his obligations and fails to remedy such default within 2 weeks of the notification of the default by the *Project Manager*, the *Employer*, without prejudice to his other rights, powers and remedies under the contract, may remedy the default either himself or procure a third party (including any subcontractor or supplier of the *Contractor*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Contractor*
- Z12.2** The *Contractor* co-operates with the *Employer* and facilitates and permits the use of all required information, materials and other matter (including but not limited to documents and all other drawings, CAD materials, data, software, models, plans, designs, programs, diagrams, evaluations, materials, specifications, schedules, reports, calculations, manuals or other documents or recorded information (electronic or otherwise) which have been or are at any time prepared by or on behalf of the *Contractor* under the contract or otherwise for and/or in connection with the *works*) and generally does all things required by the *Project Manager* to achieve this end.

Z13 ***Liens and Encumbrances***

- Z13.1** The *Contractor* keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The *Contractor*, vis-a-vis the *Employer*, waives all and any liens which he may from time to time have, or become entitled to over such Equipment and any part thereof and procures that his Subcontractors similarly, vis-a-vis the *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

Z14	Intellectual Property
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Z14.1	Intellectual Property (“IP”) rights means all rights in and to any patent, design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works.
Z14.2	IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the <i>works</i> .
Z14.3	The <i>Contractor</i> gives the <i>Employer</i> an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the <i>works</i> for the purposes of constructing, repairing, demolishing, operating and maintaining the works
Z14.4	The written approval of the <i>Contractor</i> is to be obtained before the <i>Contractor's</i> IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any <i>Contractor's</i> IP available to any third party the <i>Employer</i> shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the <i>Employer</i> would use to protect its IP
Z14.5	The <i>Contractor</i> shall indemnify and hold the <i>Employer</i> harmless against and from any claim alleging an infringement of IP rights (“ the claim ”), which arises out of or in relation to:
Z14.5.1	the <i>Contractor's</i> design, manufacture, construction or execution of the Works
Z14.5.2	the use of the <i>Contractor's</i> Equipment, or
Z14.5.3	the proper use of the Works.
Z14.6	The <i>Employer</i> shall, at the request and cost of the <i>Contractor</i> , assist in contesting the claim and the <i>Contractor</i> may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.

Z15	Dispute resolution:
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Z15.1 Appointment of the Adjudicator

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

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

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

Z15.2 Appointment of the Arbitrator

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

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

Z16 Notification of a compensation event

Z16.1 Delete “eight weeks” in clause 61.3 and replace with “four weeks”. Delete the words “unless the event arises from the Project Manager or the Supervisor giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption.”

Z17 BBEE Certificate

Z17.1 The *Contractor* shall be expected to annually present a compliant BEE Certificate. Failure to do adhere to these requirements shall be considered a material breach of the conditions of this Contract, the sanction for which may be a cancellation of this Contract.

Z18 Communication

Z18.1 **Add a new Core Clause** 14.5 and 14.6 to read as follows:
The *Project Manager* requires the written consent of the Employer if an action will result in a change to the design, scope, and Works information for any value change

Z18.2 The *Project Manager* requires the written consent of the Employer if an action will result in the Completion Date being extended by more than 1 day.

Z19 Delegation

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

- Z19.1** As part of this contract the *Contractor* acknowledge that it (mandatory) is an employer in its own right with duties as prescribed in the Occupational Health and Safety Act No 85 of 1993 as amended and agree to ensure that all work being performed, or Equipment, Plant and Materials being used, are in accordance with the provisions of the said Act, and in particular with regard to the Construction Regulations
-

PART C1.2b CONTRACT DATA

PART TWO – DATA PROVIDED BY THE CONTRACTOR

Clause	Statement	Data
10.1	The Contractor is (Name): Address: Telephone No. Fax No.	
11.2	The <i>working areas</i> are	OR TAMBO International Airport site Area. See C4 'Site Information'
24.1	The <i>Contractor's Key people</i> are:	CV's to be appended to Tender Schedule. Key personnel replacements shall meet the minimum qualification, professional registration and work experience as required at tender stage
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	
	Name:	
	Job:	
	Responsibility:	
	Qualifications:	
	Experience:	

Name:

Job:

Responsibility:

Qualifications:

Experience:

11.2	The <i>completion date</i> is	28 months from contractor appointment date (Purchase Order issue date)
11.2	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> • Existing Services • Access to Site • Delay in supply of material and/or equipment • Program management • Cash flow management
11.2	The <i>Works Information</i> is in	Part C3 'Scope of Works' section of this contract
31.1	The programme identified in the	Programme listed in Schedule 6 of Part T2.2

Part C1: Agreements and Contract Data

C1.3: Form of Guarantee

PRO FORMA FOR PERFORMANCE BOND

PERFORMANCE BOND

[TO BE REPLICATED ON BANK'S LETTERHEAD]

Brief description of contract.....

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

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

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

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

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

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

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

Signed at _____ on _____ 20....

For:
Registration Number:

Name & Position

As witnesses:

1. _____

2. _____



PART C1: AGREEMENTS AND CONTRACT DATA

C1.4: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

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

OBJECTIVES

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

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

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

The parties to this Agreement are:

Name of Organisation: AIRPORTS COMPANY SOUTH AFRICA OR TAMBO International Airport
Physical Address: Airport Company South Africa OR TAMBO International Airport Kempton Park Gauteng, South Africa, 1627

Hereinafter referred to as "Client"

Name of organisation:
Physical Address

Hereinafter referred to as "the Mandatary/ Principal Contractor"

MANDATORY'S MAIN SCOPE OF WORK

DESIGN AND CONSTRUCTION OF FIRE DETECTION AND SUPPRESSION AT OR TAMBO INTERNATIONAL AIRPORT

GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

1. The Occupational Health & Safety Act comprises of SECTION 1-50 and all unrepealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.
2. "Mandatory" is defined as including as agent, a principal contractor or a contractor for work, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant
3. Section 37 of the Occupational Health & Safety Act potentially punishes Employers (PRINCIPAL CONTRACTOR) for unlawful acts or omissions of 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 UNDERTAKING

The Mandatory undertakes to comply with:

INSURANCE

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

claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

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

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

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



FURTHER UNDERTAKING

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

ACCEPTANCE BY MANDATARY

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

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

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

Expiry date

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

DATE

SIGNATURE ON BEHALF OF THE CLIENT
AIRPORT COMPANY SOUTH AFRICA

DATE

PART C1: AGREEMENTS AND CONTRACT DATA

2 C1.4: ACSA INSURANCE CLAUSES

INSURANCE CLAUSES FOR CAPEX PROJECTS

The insurance clauses in this document should be extracted and attached to tender documents and to contracts.

SECTION A: DEFINITIONS

Landside refers to:

- Areas of the airport before the security points; and
- The restricted area beyond the security points but, within the perimeter of gatehouses, passenger terminals and cargo buildings.

Airside refers to:

- The Apron / manoeuvring areas; and
- Area within the airside boundary/perimeter fence, excluding the internal areas of the passenger terminals, perimeter gatehouses and cargo buildings.
- Fuel Farm Area

SECTION B: INSURANCE CLAUSES

1. Insurance requirements for **construction projects with a value below R150 million (Excluding VAT) at award and a construction period not exceeding 36 months on the LANDSIDE**

- Projects with a value below R150 million are automatically covered under an ACSA umbrella insurance.
- But please note that details of all projects with a value below R150 million, and with a duration that **exceeds 36 months** should be forwarded to ACSA Treasury as soon as the contractor is awarded (Email: nokulunga.masiza@airports.co.za) as these projects are not automatically covered under an ACSA umbrella insurance.

1.1 Contract Works

- The contractor must secure a contract works insurance cover in respect of all loss or damage for a minimum limit of R150 000, each and every claim.
- The contractor must secure a contract works insurance cover in respect of loss or damage arising from testing or commissioning for a minimum limit of R250 000, each and every claim.
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

1.2 Contract Works SASRIA

- The contractor must secure a contract works SASRIA insurance cover for a minimum limit of R25 000, each and every claim.

1.3 Public Liability

- The contractor must secure Public Liability insurance cover for 3rd party property damage, for a minimum limit of R75 000 for each and every claim.
- The contractor must secure Public Liability insurance cover for removal of lateral support, for a minimum limit of R75 000 for each and every claim.
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

1.4 Professional Indemnity

- All consultants must secure Professional Indemnity cover for a limit of not less than **R5 million** for contracts **under R50 million** at award.
- All consultants must secure Professional Indemnity cover for a limit not less than **R10 million** for contracts **over R50 million** at award.
- The above is also applicable to contractors who have a material design element, excluding typical P & G related work, as part of their scope.
- Proof of cover in the form of a certificate of insurance must be submitted to ACSA before a contract is signed between ACSA and the service provider.

2. Insurance requirements for **construction projects with a value below R150 million (Excluding VAT) at award and construction period not exceeding 36 months on the AIRSIDE.**

- Projects with a value below R150 million are automatically covered under an ACSA umbrella insurance.
- But please note that details of all projects with a value below R150million, and with duration that **exceeds 36 months** should be forwarded to ACSA Treasury as soon as the contractor is awarded ([Email: nokulunga.masiza@airports.co.za](mailto:nokulunga.masiza@airports.co.za)) as these projects are not automatically covered under an ACSA umbrella insurance.

2.1 Contract Works

- The contractor must secure a contract works insurance cover in respect of all loss or damage for a minimum limit of R150 000, each and every claim;
- The contractor must secure a contract works insurance cover in respect of loss or damage arising from testing or commissioning for a minimum limit of R250 000, each and every claim;
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

2.2 Contract Works SASRIA

- The contractor must secure a contract works SASRIA insurance cover for a minimum limit of R25 000, each and every claim;
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

2.3 Public Liability

- The contractor must secure Public Liability insurance cover for 3rd party property damage, for a minimum limit of R75 000 for each and every claim;
- The contractor must secure Public Liability insurance cover for removal of lateral support, for a minimum limit of R75 000 for each and every claim;
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

2.4 Aviation Liability

- The contractor must secure Aviation Liability insurance cover for 3rd party property damage and injury, for a minimum limit of USD250 000 (Two hundred and fifty US Dollars) for each and every claim.
- The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor.

2.5 Professional Indemnity

- All consultants must secure Professional Indemnity cover for a limit of not less than **R5 million** for contracts **under R50 million** at award
- All consultants must secure Professional Indemnity cover for a limit not less than **R10 million** for contracts **over R50 million** at award
- The above is also applicable to contractors who have a material design element, excluding typical P & G related work, as part of their scope
- Proof of cover in the form of a certificate of insurance must be submitted to ACSA before a contract is signed between ACSA and the service provider.

3. Insurance requirements for **construction projects with a value above R150 million (Excluding VAT), and/or projects with a construction period that exceed 36 months on the LANDSIDE and AIRSIDE.**

- Projects with a value of more than R150 million, and projects with a construction period that exceeds 36 months are not automatically covered under the annual construction policies. A separate quote and deductibles are provided by insurers per project. Details of these projects should be forwarded to ACSA Treasury as soon as the contractor is awarded (Email: nokulunga.masiza@airports.co.za).

AIRPORTS COMPANY OF SOUTH AFRICA

CONTRACT NO: _____ – DESIGN, INSTALLATION AND COMMISSION OF THE
FIRE DETECTION AND SUPPRESSION SYSTEM
OR TAMBO INTERNATIONAL AIRPORT

C2.1 Pricing Assumptions and General Notes

1. The contractor shall, as per the NEC3, contract option B: Priced contract with Bill of Quantities provide a fully priced bill of quantities, to be handed in with this tender.
2. A bill of quantities is provided with the documentation. The bill of quantities aims provide information to the contractor in regard to measured quantities, distances, etc.
3. The responsibility for the accuracy of the quantities written into the bill of quantities remains with the party who prepared the bill of quantities. The Bidder are to ensure that the measuring of quantities at the tender stage, and the Bid Sum submitted are correct and include all items required for the installation of the works, as described in the works information section of this document.
4. **A reference bill of quantities is provided with the documentation. The reference bill of quantities aims provide information to the contractor in regard to measured quantities, distances.**
5. The reference bill of quantities also provides an overview to the contractor on which items is expected to be included in the works, and serve as a checklist to the contractor to ensure all items are accounted for.
6. The Bill of Quantities comprises items covering the Contractor's profit and costs of general liabilities and of construction of temporary and permanent Works.
7. The Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill but his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional Works carried out and that the Employer's Agent is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Bill.
8. All the rates tendered and inserted in the Bill of Quantities shall be **exclusive** of VAT. Provision has been made on the Summary Page of the Bill of Quantities for the addition of VAT. Except that they shall not include Value Added Tax (VAT), the rates to be inserted in the Bill of Quantities are to be the full inclusive rate to the Employer for the work described under each item. Such rates shall cover all costs and expenses that may be required in and for the construction of the work described and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.
9. A rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no rate has been entered will be considered to have a rate of R 0, 00.
10. The Tenderer must price and extend each item, total each page and carry the total of each section

in the Bill of Quantities to the Summary page.

11. Attention is drawn to Clause 6.7 of the Conditions of Contract and the Contractor must not order the quantities of materials stated in the Bill of Quantities until he has confirmed from the construction drawings or measurement on Site that such quantities are in fact the correct quantities. The quantities set out in the Bill of Quantities are the estimated quantities of the Contract Works but the Contractor will be required to undertake whatever quantities may be directed by the Employer or Employer's Agent from time to time. The final Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
12. The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
13. Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.
14. Arithmetical errors of responsive tenders shall be corrected in the manner specified under the Standard Conditions of Tender. **(Refer also CIDB Practice Note No. 2 dated August 2006)**
15. The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

%	=percent
hr	=hour
ha	=hectare
kg	=kilogram
kl	=kilolitre
km	=kilometre
km-pass	=kilometre-pass
kPa	=kilopascal
kW	=kilowatt
l	=litre
m	=metre
mm	=millimetre
m ²	=square metre
m ² -pass	=square metre-pass
m ³	=cubic metre
m ³ -km	=cubic metre-kilometre
MN	=meganewton
MN.m	=meganewton-metre
MPa	=megapascal
No.	=number
Prov sum	=Provisional sum
PC sum	=Prime Cost sum
R/only	=Rate only
L/sum	=lump sum
t	=ton (1000 kg)
W/day	=work day



**CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE
FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT**

C2.3.1 Schedule A: Supply and Installation

C2.3.2 Schedule B: Professional Services Team

C2.3.3 Summary of Schedules

**CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE
FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT**

C2.3.1 Schedule A: Supply and Installation

**BIDDER TO COMPLETE BILL OF QUANTITY IN EXCEL DOCUMENT PROVIDED AND
ATTACH PDF COPY AS ANNEXTURE TO THIS SUBMISSION**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>FIRE PROTECTION WORKS - SCHEDULE 1</u>				
1,100	PRELIMINARY AND GENERAL				
1,101	Induction Training and Permits				
1,102	Provisional sum provided for Airside Training and permit. It will be claimed on cost basis (To be paid upon submission of invoices, certificates, permits etc)	Sum	1		
1,103	Vehicle testing, tools and equipment permits It will be claimed on cost basis	Sum	1		
1,104	Site Office including establishment	Months	14		
1,105	Material Storage	Months	14		
1,106	Allow for providing temporary services necessary for the works	Months	14		
1,107	Allow for site meetings and progress reporting	Item	1		
1,108	Insurance				
1,109	12 month Guarantee after handover	Item	1		
1,110	Performance Bond	Item	1		
1,111	Health and Safety	No.	1		
1,112	Allow for OSH Act No.85 of 1993 safety file	No.	1		
1,113	Allow for contractor's internal meetings (toolbox talks etc)	Item	1		

1,114	Method Statement				
1,115	Allow for detailed method statement for executing the whole works. The plan should include the works procedure, Health and Safety Plan, Fall Protection Plan, Works program, Site Organizational Structure, Waste Disposal Plan, e.t.c.	Item	1		
1,116	Supervision				
1,117	Allow for co-ordination of the works in this contract with works carried out by other contractors.	Sum	1		
1,118	Sub Total (Carried forward)				

**CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE
FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT**

**BIDDER TO COMPLETE BILL OF QUANTITY IN EXCEL DOCUMENT PROVIDED AND
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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1,200	Brought forward				
1,201	Allow for planning and planning meetings with ACSA personnel officer etc)	Item	1		
1,202	Submission of Samples				
1,203	Allow for the submission and approval of samples to be used.	Item	1		
1,204	As-Built Drawings				
1,205	Allow for the provision of sets of as-built hard copy drawings (A1 Size)	Sets	3		
1,206	Allow for the provision of soft copy as-built drawings (AutoCad and pdf)	Item	1		
1,207	Operation and Maintenance				
1,208	Maintenance and guarantee of the works for the period specified	Item	1		
1,209	Allow for hard copy sets of operation and maintenance manuals	Sets	3		
1,210	Allow for soft copy sets of operation and maintenance manuals	Item	1		
1,211	Material Disposal				
1,212	Dispose material waste	Sum	1		
1,213	Site De-establishment	Item	1		

1,214	TOTAL CARRIED TO SUMMARY				

**CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE
FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT**

**BIDDER TO COMPLETE BILL OF QUANTITY IN EXCEL DOCUMENT PROVIDED AND
ATTACH PDF COPY AS ANNEXTURE TO THIS SUBMISSION**

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>FIRE PROTECTION WORKS - SCHEDULE 2</u>				
2,100	TERMINAL BUILDING, PARKING BUILDING AND CARGO BUILDINGS				
2,101	Existing Installation				
2,102	Trace all the circuits from the existing	Item	1		
2,103	Decommission all equipment and wiring	Item	1		
2,104	Supply of Material				
2,105	GWin Computers	No.	1		
2,106	Ziton ZP3 Panel	No.	72		
2,107	Break Glass Units	No.	583		
2,108	Smoke Detectors/ Heat	No.	10 941		
2,109	Line Relays	No.	3 518		
2,110	Interface Units	No.	928		
2,111	Line Sounders	No.	520		
2,112	Optical Beams Detectors	No.	113		
2,113	Aspirating Systems	No.	14		
2,114	Gas Control Units Addressable	No.	147		
2,115	FM200	No.	160		
2,116	UV Flame Detectors	No.	22		
2,117	FirePro 500s	No.	122		

2,118	FirePro 5700	No.	121		
2,118	Omnidirectional Sounders	No.	82		
2,119	FM200	No.	7		
2,120	Energen	No.	12		
2,121	Fire curtains supply 240V	No.	137		
2,122	Vesda Units	No.	41		
2,123	Logbooks and logbook holders	No.	72		
2,124	26dB Sounders for warehouses	No.	30		
2,125	PH30 Cables	m	3 000		
2,126	Install	No.	1		
2,127	Sub Total (Carried forward Summary)				

CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT

BIDDER TO COMPLETE BILL OF QUANTITY IN EXCEL DOCUMENT PROVIDED AND ATTACH PDF COPY AS ANNEXTURE TO THIS SUBMISSION

C2.3.2 SCHEDULE B: Professional Services Team

Item	Description	Amount R
1	<u>Construction Project Manager</u>	
Percentage (%) of the construction value, total amount of Schedule A Bill of Quantity, of R_____ (excl VAT) for Construction Project Manager		
Project Manager services fee is _____ %		
1.1	Stage 1 – Inception	
1.2	Stage 2 – Concept Development	
1.3	Stage 3 - Design Development	
1.4	Stage 4 - Design Documentation	
1.5	Stage 5 - Construction	
1.6	Stage 6 - Close-Out	
1.7	Subtotal 1	
2	<u>Electrical Engineer</u>	
Percentage (%) of the construction value, total amount of Schedule A Bill of Quantity, of R_____ (excl VAT) for Civil Engineer		
Engineer services fee is _____ %		
2.1	Stage 1 – Inception	
2.2	Stage 2 – Concept Development	
2.3	Stage 3 - Design Development	
2.4	Stage 4 - Design Documentation	
2.5	Stage 5 - Construction	
2.7	Construction Monitoring (Level 2 @ 8hrs per week)	
2.8	Collation of information; municipal inspections, tests, site and other investigations.	
2.9	Stage 6 - Close-Out	
2.10	Subtotal 2	

3	<u>Quantity Surveyor</u>	
Percentage (%) of the construction value, total amount of Schedule A Bill of Quantity, of R_____ (excl VAT) for (quantity surveyor)		
Quantity Surveyor services fee is _____%		
3.1	Stage 1 – Inception	
3.2	Stage 2 – Concept Development	
3.3	Stage 3 - Design Development	
3.4	Stage 4 - Design Documentation	
3.5	Stage 5 - Construction	
3.6	Stage 6 - Close-Out	
3.7	Subtotal 3	
4	<u>Construction Health and Safety Agent</u>	
Percentage (%) of the construction value, total amount of Schedule A Bill of Quantity, of R_____ (excl VAT) for Construction Health and Safety		
Construction Health and Safety Agent services fee is _____%		
4.1	Stage 1 – Inception	
4.2	Stage 2 – Concept Development	
4.3	Stage 3 - Design Development	
4.4	Stage 4 - Design Documentation	
4.5	Stage 5 - Construction	
4.6	Stage 6 - Close-Out	
4.7	Subtotal 4	
5	Subtotal 5 (Sum subtotal 1-4)	
6	*Add Disbursements	
7	Add Contingencies (10% of item 5 – Subtotal 5)	
	Subtotal 7	
	Add 15% VAT	
	TOTAL (export to form of offer C1.1)	

*Provide detailed breakdown of all items catered for under the disbursement:
(Include once off cost of **R5,000.00** for airport personal permits for staff dedicated to the project)



CONTRACT NO: _____ DESIGN, INSTALLATION AND COMMISSION OF THE FIRE DETECTION AND SUPPRESSION SYSTEM OR TAMBO INTERNATIONAL AIRPORT

BIDDER TO COMPLETE BILL OF QUANTITY IN EXCEL DOCUMENT PROVIDED AND ATTACH PDF COPY AS ANNEXTURE TO THIS SUBMISSION

SUMMARY OF SCHEDULES

Schedule / Line	Description	Amount (Rand)
A	SCHEDULE A (Schedule 1 plus 2)	_____
B	SECHEDULE B	_____
1	TOTAL OF SCHEDULES ABOVE	_____
2	CONTINGENCIES (10% OF LINE 1 ABOVE)	.....
3	CONTRACT PRICE ADJUSTMENT (Provisional Sum)	4 100 000.00
4	SUBTOTAL OF LINES 1, 2 AND 3 ABOVE	.....
5	VALUE ADDED TAX (15% OF LINE 4 ABOVE)	.....

TOTAL OF LINES 4 AND 5 ABOVE (CARRIED FORWARD TO FORM OF OFFER)



C2.3 DECLARATION (In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced according to part C2.2 of this Contract Document in consecutive order upon which my/our tender for **BID NO. : _____ DESIGN, INSTALLATION AND COMMISSION OF THE FIRE DETECTION AND SUPPRESSION SYSTEM AT OR TAMBO INTERNATIONAL AIRPORT** has been based.

SIGNATURE OF TENDERER/S

DATE

C3: Employer's Works Information

- C3.1 Introduction
- C3.2 Description of the Works
- C3.3 Professional Services Scope of Work
- C3.4 Engineering
- C3.5 Procurement
- C3.6 Construction
- C3.7 Management
- C3.8 Particular Specifications
- C3.9 Generic Specification

TERMS AND ABBREVIATIONS

Engineer: “Engineer” referred to in the works information also refer to the Supervisor for this contract, the details thereof as stated in Part C1.2 Contract data.

The Client: “The Client” referred to in the works information is synonymous to the The Employer for this contract, the details thereof as stated in Part C1.2 Contract data.

C.3.1 Introduction

Airports Company South Africa (ACSA) SOC Ltd (Employer) aims on upgrading the fire detection and suppression system to ensure compliance to applicable standards at O.R. Tambo International Airport hence this project has been initiated. The fire detection and suppression system (FDSS) has been in-service and maintained for over 15 years at ORTIA Passenger & Cargo Terminals. There are technical and compliance issues with interfaces to monitor auxiliary power supply units (PSUs). The type of cables currently installed are no longer compliant to SANS 10139, some conventional sounders at the warehouses are less than 65 decibels (DB), outdoor fire control panel (ZP3 panel) exposed to moisture are not using weatherproof Ingress Protection 65 (IP65 code) rated panel enclosure, there are no evacuation signs in other areas, zone plans and as-built drawings are not in place and there is no proof that integrity tests was ever performed during the initial installation. Logbooks or logbook holders, strobes or EVAC sign, a second discharge alarm, and steel piping for PVC conduit are not installed. In addition, the majority of FDSS relays are not interfaced with escape doors people, people movers, emergency exit route, parking boom gates, automatic sliding doors.

The Employer intends ensuring the fire detection and suppression system complies with the applicable national standards through a design and build contract, wherein the Contractor will be responsible for the design and the

construction of the works. The Contractor will carry out their services from Concept and Viability stage until the Close out stage.

C.3.2 Description of Works

C3.2.1 Overview of The Works

The contract comprises:

The scope includes the upgrade of the fire detection and suppression system through a design, supply, installation, and commissioning contract.

The project scope is limited to the passenger terminal buildings, Parking buildings and Cargo buildings at OR Tambo International Airport including.

A significant portion of the works falls within the airport airside or restricted areas and the associated restrictions on access and methodologies form an important aspect of this contract.

C3.2.3 Extent of The Works

Detailed description of the scope as follows:

The scope includes the upgrade the fire detection and suppression system to comply with SANS 10400 part T (fire protection), SANS 10400 part W (fire installation) and SANS 10400 part A (general principals & requirements for application of the national building regulations or structural design), SANS 10139 (fire safety standards), SANS 369 (operation of gas extinguishing systems), SANS 61386 (conduit systems for cable management)

The project scope includes the passenger terminal buildings, airport parking buildings and Cargo buildings including;

1. Terminal A and B common areas and tenants' areas.
2. Central Terminal Building (CTB).
3. Multi Story Parking (MSP), MSP1 and MSP2 common areas, parking areas and some tenants' kiosks.
4. Airport Management Centre (AMC).
5. KB1 and KB2
6. All substations in Terminal Buildings.
7. Cargo Agents building.
8. Cargo warehouses.
9. All substations at Cargo warehouses and Cargo Agents Building.

The scope of work to be carried out under this contract shall consist of the following:

1.1.1 Fire Detection and Emergency Evacuation System

A P1 and M Classification fire detection system shall be installed to serve the offices and plant rooms.

Allowance has been for detection throughout the common areas and escape routes. Detection system shall be in full compliance with SANS 10139:2012. Manual call points shall be provided at all fire hose reels, and at all escape doors and in passages at strategic places.

The fire detection system will interface with the following systems:

- a. Smoke ventilations systems used for removing smoke from the buildings;
- b. Fire dampers in order that they shut down and retain the integrity of the fire walls through which they pass;
- c. All sprinkler flow switches;
- d. An automatic link to the Fire Department;
- e. Releasing all door locks on access controlled access doors;

To ensure safety throughout the buildings an analogue addressable fire alarm system is needed which can be zoned to arrange for fire warning signals, to be given on all floors in an east or west zoning configuration, and areas depending on the location of the manual fire alarm call point, which is actuated.

The detection and fire alarm systems are major factors in considering evacuation procedures for the building.

- Immediate evacuation in an alarm situation is needed from the area of origin of the alarm.
- Based on the predetermined time scale, an alert signal needs to automatically default to an evacuation signal.

A fire detection and emergency evacuation system with the following basic characteristics shall be provided:

C3.3 Professional Services scope of Work

C3.3.1 Project Manager

Standard and full project management services for the Fire Detection and Suppression system upgrade scope of work as per the Guidelines for Scope of Services in respect of services for such work rendered by persons registered in terms of the Project and Construction Management Professions Act, 2000 (Act No. 48 of 2000).

Project Manager will be the project lead for the professional services appointed on the project.

Extent of the Project Management Services:

- Planning, programming, reporting and management of the condition assessment process (Due Diligence).

- Planning, programming, reporting and management of the phasing and interface of construction so as not to interfere with normal operation of existing terminal spaces.
- Planning, programming and management of operational readiness of areas under the project scope and interface areas.
- Liaison with internal and external project stakeholders to ensure approval and delivery of the project timeously.
- Risk identification, management and reporting during life of the project

C3.3.2 Engineers

Standard and full engineering services under each engineering discipline for the Tarred Emergency Access Roads scope of work as per the latest Guideline for Scope of Service for such Persons Registered in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000).

Extent of the Engineering Service:

- Planning, design, management of implementation, handover and close out for the multiple disciplines to be provided in the project as tendered and to included but not limited to the following;
- Planning, programming, management and reporting of all condition assessment required to execute all pertinent phases of the project (Due Diligence exercise).
- Planning, programming, management and reporting of the phasing and interfaces of services installations so as not to interfere with normal operations of existing engineering installations and terminal spaces.
- Planning, programming and management of operational readiness of all engineering installations in areas under the project scope and the interface areas.
- Liaison with internal and external project stakeholders to ensure specific compliances crucial to the delivery of the project.
- Risk identification, management and reporting during life of the project
- Design and specification of engineering services for overall improved life cycle of all engineering services.

C3.3.3 Quantity Surveyor

Standard and full Quantity Surveying services for the alterations and additions work for the Tarred Emergency Access Roads scope of work as per the Guidelines for Scope of Service in respect of services rendered by persons registered in terms of Section 34(2) of the Quantity Surveying Profession Act, 2000 (Act 49 of 2000) guideline of professional fees.

Extent of the Quantity Surveying Services

- Project financial risk assessment, management and reporting.
- Pro-active project budget management and reporting.
- Implement project cost saving solutions on behalf of Client.
- Diligent and proactive project cash-flow management and reporting.
- Project Capitalisation at completion stages of the project.

C3.3.4 Construction Health and Safety Agent

Standard and full project management services for the Tarred Emergency Access Roads scope of work as per the Guidelines for Scope of Services in respect of services for such work rendered by persons registered in terms of Construction Health and Safety Professionals Registered in terms of the Project and Construction Management Professions Act, 2000 (Act No. 48 of 2000).

C3.4 ENGINEERING

C3.4.1 Design Services and Activity Matrix Works signed by, per design stage:

(a) Inception	Employer
(b) Concept, feasibility and overall process	Employer
(c) Basic engineering and detail layout to tender stage	Employer
(d) Final design approved for construction stage	Employer/ Municipal Chief Inspector
(e) Temporary works	Contractor



- | | | |
|-----|--|------------|
| (f) | Information for preparation of "as built" drawings | Contractor |
| (g) | Preparation of as-built drawings and closeout | Contractor |

C3.4.2 DRAWINGS

ACSA will provide, **where possible**, existing infrastructure drawing. The drawings will be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

C3.5: PREFERENTIAL PROCUREMENT PROCEDURES

C3.5.1 Requirements

This contract shall be procured in accordance with the preferential procurement policies and requirements of the Airports Company South Africa and the National Government. These documents shall be made available from the Employer on request.

C3.6: CONSTRUCTION

C3.6.1 Standard Specifications

For the purposes of this Contract the latest issues of the following specifications shall be applicable:

- SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
- ACSA Standards and Guidelines for Fire Detection System & Gaseous Suppression System (hereto attached)
- SANS Standards as listed below:

Standard Number	Description
SANS 10400 Part T	Application of the National Building Regulations - Part T: Fire Protection
SANS 10139:2021:	Code of practice for design, installation, commissioning and maintenance of fire detection and alarm systems in non-domestic premises
SANS 369-1:2004	Code of practice for the operation of fire protection measures. Part 1: Electrical actuation of gaseous total flooding extinguishing systems
SANS 50054-2:1997	Fire detection and fire alarm systems. Part 2: Control and indicating equipment.
SANS 50054-3:2001:	Fire detection and fire alarm systems. Part 3: Fire alarm devices — Sounders
SANS 246	Fire protection for electronic equipment installations – Code of practice
SANS 530-9	Fire detection and fire alarm systems for buildings Part9: Code of Practice for the design, installation, commissioning, and maintenance of emergency voice communication systems
SANS 1066	Remote centres receiving signals from fire and security systems
Occupational Health and Safety Act no 85 of 1993 and Regulations	
Applicable Site Insurance Requirements	
Applicable Approving Council's Bylaws and requirements	
Engineering Profession act 46 of 2000	
Identification of Engineering Work Regulations of 2021	
Quality Management System ISO 9001	

GENERAL

GENERAL DESCRIPTION OF THE PROJECT

Design, supply and installation of fire detection and suppression system at OR Tambo International airport.

DESCRIPTION OF THE WORK

This description is a broad outline of the contract works and does not limit the work to be executed by the Contractor in terms of the Contract. The quantities of some of the major items indicated in this section are indicative, not absolute, and are provided to define in general terms, the overall scope of the project.

Approximate quantities of each type of work to be carried out in accordance with the contract documents are listed in the Schedule of Quantities of this Document.

2.1 The Site

The Contractor shall confine his site area to the alignments of the roads as shown on the drawings and to the areas immediately adjacent to those alignments. Haul roads or working space shall be adjacent to the alignments or other construction works, and shall only be wide enough to allow for reasonable vehicular access or operations to proceed. No other areas of the airport property, particularly within the airside may be disturbed or utilised for construction or storage activities without the written approval of the Airports management or his representative. The location for the site camp will be at a location to be agreed by the Employer.

2.2 Access to the Site

Access to the site shall be as follows:

- All airside works areas shall be accessed via the Gate that will be identified by ACSA.

Any request to access or leave the airside via alternative access points shall be made timeously and in writing to the Airports management. It must be noted that these requests will only be granted in exceptional circumstances or if the nature of the works adjacent to the gates requires that vehicles or staff pass through the gate opening. The passing of objects through, under or over the fence or gates shall also be prohibited.

Access within the airside shall only done via the existing airport road network. No other road or access ways shall be constructed or permitted. Access to and use of public roads and areas outside of the airside shall be governed by the relevant Road Traffic ordinance of the relevant authorities or by limitations imposed by landowners.

The Contractor, in making use of existing roads for hauling of materials to or from the site, shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within one (1) days of such spillage occurring, except for

airside areas, where the spillage shall be cleared immediately. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.

2.3 Nature of the work

The nature of the work included in this Contract is fire detection and suppression system upgrade. The work is to be undertaken by Contractors with the necessary expertise, resources and previous experience of constructing civil engineering works of a similar nature and order. The Contractor's previous experience shall also include the ability to work in restricted access areas and within restricted working hours.

2.4 Detailed description of the project

The detailed description of the works shall be as per C3.1 above.

2.5 Areas for equipment storage

New construction equipment and decommissioned equipment may be temporarily stored in areas as agreed by the Engineer / Employer. Stockpiling of materials within the airside will be strictly controlled in accordance with the requirements of the Employer and air traffic control authorities. All materials stockpiles or storage areas shall be kept in a neat manner and shall be controlled / protected/ contained from wind or rain, so as not to cause damage to adjacent areas or to reduce visibility.

All decommissioned equipment shall be disposed with agreement by the Employer.

2.6 Liaison with Interested and Affected Parties

There are a number of interested and affected parties related to this project and liaison meetings will be held on a fortnightly basis to allow concerns to be raised / addressed and for information to be distributed to them. These meetings will be held at a venue to be agreed and the Contractor shall make himself or a representative available to attend these meetings.

The following is a list of persons or parties that have an interest in or are affected by this contract.

- Airport Management Central Control Centre (AMC)
- Infrastructure Management Centre (IMC)
- Airport Operations Management

2.7 Materials Information

All Existing equipment to be decommissioned and scrapped in liaison with Airport operations, Infrastructure Asset Management(IAM).

2.8 Proposed Construction Programme

Tenderers must submit with their Tender comprehensive details of their proposed construction programme for the works.

The Tenderer shall state in the Appendix to the Form of Tender the time for completion. Within 14 days after awarding the contract, the Contractor shall submit his programme to the JMT for approval, in the form of a bar chart, showing clearly:

- (a) the proposed rate of progress in order to complete the works within the required period as stated in the Appendix, stating the various activities and their duration for each element of the works in sufficient detail to be able to gauge construction progress;
- (b) the Contractor's plant commitment on the contract;
- (c) critical path activities;
- (d) his anticipated value of work (cash flow) to be done during each month;

When preparing a construction programme, the Contractor must note the following:

- (a) All work is to be completed within 12 months, inclusive of any number of 'Construction Industry Holidays' in December and January which may occur, and all 'Special non-working days'
- (b) The time for achieving Practical Completion is 8-12 months. It must be noted that the
- (h) Allowance must be made for 'Special non-working days' as described in C1.2: Contract Data Provided by the Employer.
- (i) Allowance for any time required for accommodation of vehicular or pedestrian traffic to comply with the stated requirements in terms of maintaining access
- (j) Allowance for any time required for accommodation of aircraft or airfield related operations and for working within an operational airport as described in Volume 3: Procedure Manual

2.9 Climate

The rainfall records applicable in respect of this Contract are those recorded by the meteorological department at OR Tambo International Airport and shall be those used for calculating the extension of the Time for Completion on account of abnormal rainfall.

Claims for extension of time shall be adjudicated in terms of NEC ECC compensation event.

2.10 Existing Services

Contractor is to prove, protect and maintain all existing services encountered on site for the duration of the contract and would be required to remove, realign or temporarily replace services as required under this contract.

In the case of specialist services (eg fibre optic or data) where the service owner is required to relocate their services, the contractor shall liaise with the service owner to determine the extents and timeframe of the relocation and to incorporate this information in his own programme and works methodology. The contractor may not refuse the service owner access to the site and shall provide the service owner sufficient space to do the relocations in a safe and logical method. The programming of the relocations shall be negotiated between the contractor and service provider.

Where necessary, the relocation / protection of services shall be done by the contractor under the supervision of the service owner.

2.12 Security

The provision of security for the Contractor's Site Establishment shall be his own responsibility, and no claims for additional security measures taken during the currency of the contract will be considered

It is the responsibility of the Contractor to provide adequate security for the material on site and the works. Together with good community liaison and involvement, it is possible to maintain the risk at an acceptable level and have a successful project.

ENVIRONMENTAL IMPACT CONTROL

Respect for the environment is important for this Contract. The environmental control of the site shall be governed by the Environmental Management Programme (EMPr) included in section C3.5 Management portion of this document, which provides inter alia, for:

- (i) The Contractor must make provision for the prevention of excessive erosion and siltation in the construction area and in particular on adjacent areas.
- (ii) Should excessive erosion and/or siltation take place outside the works area as a direct result of the Contractor's construction activities it will be the Contractor's responsibility to make good the erosion/siltation to the satisfaction of the landowner and the Engineer, all at the cost of the Contractor.
- (iii) No littering by construction workers shall be allowed. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the Engineer.

- (iv) Adequate provision shall be made for temporary toilet requirements in construction areas. Use of the veld for this purpose shall not be allowed under any circumstances.
- (v) Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants, such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate tailings, wash water, organic materials and bituminous products. In the event of spillage, prompt action shall be taken to clear the affected area. Emergency measures in the event of spillage must be set out and the responsible person made aware of the required action.
- (vi) Hazardous products shall not be spoiled on site and may only be disposed of in licensed, authorised disposal facilities.

No separate payment will be made for observing these requirements as it is deemed to be included in the amount tendered for Item 13.01(c) but any avoidable noncompliance with these rules may be considered sufficient grounds for withholding payment of part or all of the amounts to be paid for the above item.

CONTRACTOR'S SITE OFFICE

Possible locations for the Contractor's camp site will be indicated at the site inspection.

The Contractor must take full cognizance of the regulations regarding the clearing of bush and felling of trees and no tree may be removed without the written permission of the Engineer and Employer. In establishing and maintaining the camp site, due cognizance is also to be taken of Section 1200 of the Standard Specifications.

The standard of the Contractor's camp, offices, accommodation, ablutions and other facilities must comply with the regulations of the relevant authority. Details of the facilities to be provided are to be submitted to the Engineer for approval.

The Contractor is to familiarize himself and comply with, all local by-laws and Government Regulations pertaining to the employment, transport and accommodation of labour.

FACILITIES FOR THE ENGINEER

The facilities required by the Engineer are detailed in C3.6 Particular Specifications of this document. The cost of maintenance and provision of services of these facilities shall be deemed to be included in the Contractor's Establishment and General Obligations payment items.

All quality control tests will be undertaken by a commercial laboratory. Payment for the tests requested by the Engineer shall be paid for by the Contractor who shall claim these amounts in the monthly progress payments.

POWER SUPPLY AND OTHER SERVICES

The Contractor shall make his own arrangements for the supply of electricity and other services. No direct or additional payment shall be made for the provision of such services. The cost thereof shall be deemed to be included in the rates tendered for the various items of work for which these services are required or in the Contractor's Establishment and General Obligations payment items.

RECORD DRAWINGS

As the work progresses, the Contractor shall keep full records of all amendments to and deviations from the drawings as issued to the Contractor at the start of the contract. The true positions, invert levels and ground levels of all services exposed or encountered, as well as the cover levels, shall be indicated on the drawings.

Record drawings are to be completed as work progresses and will be signed at progress meetings. The completion certificate shall only be issued after the Engineer has received a properly marked up set of record drawings and a ground and services survey in a format to be agreed. The survey shall be based on the same datum and trigonometric points as the issued construction drawings.

Should this aspect not be strictly adhered to, the Engineer may withhold payment of all related items and / or release of retention amounts until the Contractor complies with this clause. No separate payment has been allowed for this service, and all costs related thereto shall be deemed to be included in the either the related item or the Contractor's Establishment and General Obligations item.

PROTECTION OF PRIVATE PROPERTY

The Contractor shall take all the necessary steps to protect private and airport property during construction. All fences, buildings, lean-tos, etc. shall be protected against damage that may arise as a result of the Contractor's operations on site. The Contractor shall bear the cost of the repair of any damage to any private property, damaged as a result of the Contractor's operations on site.

The Contractor shall also provide access to the existing dwellings / businesses at all times. Where it is necessary to restrict access, the contractor shall obtain written permission from residents / business owners describing the extents and duration of the restriction. Full access shall always be provided outside of working hours or on non-working days.

The contractor shall nominate a safety representative who shall be available at all times to deal with incidents or problems on the site, whether caused by the contractors works or not. The contact details of the representative shall be provided to the Employer, Engineer, local traffic / policing authorities and local community representatives. This requirement shall also apply should the contract extend across any site closure periods.

COMMUNICATIONS EQUIPMENT



The Contractor is to arrange for his own telephone / cell phone / fax on site, which is to be made available to the Engineer or his representative for official purposes during working hours. All costs associated hereto shall be the responsibility of the Contractor.

- It must be noted that there are restrictions to the type and use of radio or communications systems in and around the airport precinct and the contractor is to obtain permission for the installation and use of these prior to use (Refer to Procedure Manual for Working on Airside in Volume 3 of these documentations)

DEALING WITH WATER

The contractor shall be responsible for dealing with all water during the construction from whatever source, and the cost of all de-watering, unless otherwise itemised in the Schedule of quantities, shall be deemed to be included in the tender price.

C3.9: Generic Specifications

The Specifications herein are Specifications prepared by the employer applicable to this contract. Three Specifications are included:

- C3.9.1: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS C3-75**
- C3.9.2: ENVIRONMENTAL WORK INSTRUCTIONS C3-135**
- C3.9.3: REQUIREMENTS OF GOVERNMENT'S PROGRAMME FOR BROAD-BASED BLACK EMPOWERMENT.....C3-- 154 -**

C3.9.1: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

This part of the Specifications 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

PART A: GENERIC SPECIFICATIONS

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 and inspection of 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 as well as provide health and safety plans for evaluation.

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 7721 of 18 July 2003 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 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 OHS Act, 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 OHS Act 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 7721 of 18 July 2003 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 OHSS requirements 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 as well as project specific matters given to all employees before commencement of work or other visitors to the 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 Principle Contractor, Contractors and Sub-Contractors.

3. REQUIREMENTS AT TENDER STAGE

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

A 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.

4. NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

Due to the estimated project cost the Clients Health and Safety Agent will apply for a construction works permit. No construction or related work such as site establishment or delivery of any equipment or material may commence before the construction works permit has been received and the Engineer approved the start of the works.

A copy of the construction works permit must be conspicuously displayed at the main entrance to the site as well as be kept on the health and safety files, and be available for inspection by inspectors, Employer, Engineer, employees and other duly authorised persons on site.

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

5.1 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.

5.2 Framework for an Occupational Health and Safety Plan

5.2.1 Introduction

The Contractor has to 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

5.2.2 Contents of an Occupational Health and Safety Plan

The Occupational Health and Safety Plan shall include the following:

5.2.2.1 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

5.2.2.2 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 on site 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. APPOINTMENT OF SAFETY PERSONNEL

6.1 Construction Supervisor

In terms of Section 16 of the Act, the Chief Executive Officer of the Contractor may delegate, in writing, part or all of his powers to a suitable person on the site.

The Contractor shall appoint a full-time Construction Manager, in writing, in terms of Section 8.(1) of the Construction Regulations with the duty of supervising the performance of the construction work as well as ensuring occupational health and safety compliance.

He may also have to appoint one or more competent employees to assist the construction manager where justified by the scope and complexity of the works as well as an Alternate Construction Manager when applicable.

6.2 Construction safety officer

In terms of Section 8(5) of the Construction Regulations the Contractor shall appoint in writing a full-time Construction Safety Officer which is duly accredited by SACPCMP. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision will be made in the Bill of Quantities to cover the cost of a dedicated construction safety officer appointed after award of the contract.

6.3 Health and safety representatives

In terms of Sections 17 and 18 of the Act (OHSA 1993) the Contractor shall appoint, in writing, a health and safety representative whenever he has more than 20 employees in his employ on the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees which will include the employees of subcontractors

The function of the health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, but at least on a weekly basis to participate in consultations with inspectors and to attend meetings of the health and safety committee.

6.4 Health and safety committee

In terms of Sections 17,18 and 19 of the Act (OHSA 1993) the Contractor (as employer), shall establish one or more health and safety committee(s) where there are two or more health and safety representatives at a workplace. The persons selected by the employees and appointed by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor's representative and any Department of Labour inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of meetings, recommendations and reports made by the committee.

6.5 Competent persons

In accordance with the Construction Regulations the Contractor shall appoint, in writing, competent persons responsible for supervising construction work for the following work situations that may be expected on the site of the works, as applicable to the project.

- Risk assessment (Regulation 9);
- Fall protection (Regulation 10);
- Excavation work (Regulation 13);
- Demolition work (Regulation 14);
- Suspended platform operations (Regulation 17);
- Material Hoists (Regulation 19);
- Bulk mixing plant operations (Regulation 208);
- Explosive actuated fastening device (Regulation 21)
- Construction vehicle and mobile plant (Regulation 23);
- Use of temporary storage of flammable liquids on construction site (Regulation 25);
- Water environments (Regulation 26);
- Housekeeping on construction sites (Regulation 27)
- Stacking and storage on construction sites (Regulation 28);
- Fire precautions on construction sites (Regulation 29); and
- Construction employees' facilities (Regulation 308).

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with all requirements of the Construction Regulations.

7. 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 Principal 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, inclement weather etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet & 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 Principal 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, Construction Manager, Safety Officer 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 Principal Contractor and all Contractors 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 Principal 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 5 or more employees shall supply their own first aid box. Contractors with 10 or more employees shall have a trained and certified First Aider on site at all times.

Personal Protective Equipment (PPE) and Clothing

The Principal Contractor shall ensure that all employees 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 employees. The Principal Contractor and all Contractors shall make provision and keep adequate quantities of SABS approved PPE on site at all times. This shall include necessary safety gear for visitors. The Principal Contractor shall clearly outline procedures to be taken when PPE or Clothing is:

- Lost or stolen
- Worn out or damaged
- Issued to temporary employees.

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, 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) maintain a Health and Safety File on site at all times. 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 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 Material Safety Data Sheets
- All Hazard Identification and Risk Assessments carried out for the project.
- All Health and Safety Plans for the project.
- All safe working procedures and 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 Principle Contractor by any subcontractors 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 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 or asset 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, Health and Safety Agent, 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) (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 be based upon as well as be expressed as a percentage (i.e. 1%) of the Work Value of the Tender (Total: Schedule A).

“Item	Unit
C11.01 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 construction works permit has been issued by the Department of Labour .
 - (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.”

“Item	Unit
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C11.02 Contractor’s time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations Month

The tendered rate shall represent full compensation for that part of the contractors general obligations in terms of the Occupational Health and Safety Act and the Construction Regulations which are mainly a function of time. The sum will be paid per month only after payment for Item C11.01 has been made. This item shall also cover all updates of the files, plans and reports associated with the Occupational Health and Safety Act and the Construction Regulations.”

“Item Unit

C11.03 Provision of full time Construction Safety Officer Month

The tendered sum shall include for the cost of a SACPCMP accredited construction safety officer on a full time basis, his overheads, transport and all others items necessary for the proper carrying out of his duties. .”

“Item Unit

C11.04 Submission of the Health and Safety File Lump Sum

This amount will be paid only once the Contractor has met all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged on this specification to the Client’s satisfaction. This must be done prior to the issue of a Certificate of Completion.”

Project Health and Safety Specification

In terms of Construction Regulations 2014

Client

ACSA

Description of Project Works

**FIRE DETECTION AND SUPPRESSION SYSTEM
UPGRADE**

Project Location

OR TAMBO INTERNATIONAL AIRPORT

Date

February 2024

PROJECT HEALTH AND SAFETY SPECIFICATION

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1.0 SPECIFIC PROJECT INFORMATION

1. 1 INTRODUCTION AND DEFINITIONS

PLEASE NOTE THAT THE REQUIREMENTS OF THE NEW CONSTRUCTION REGULATIONS 2014 HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE NEW REGULATIONS PLACE ADDITIONAL LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THESE NEW REQUIREMENTS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to plant and machinery. Compliance to the requirements of the Occupational Health and Safety Act 1993 is in addition to the requirements of this Health and Safety Specification and is part of the Contractor's responsibility. The Client will monitor that the Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO CLIENT AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"agent" means a competent person who acts as a representative for a client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"construction site" means a work place where construction work is being performed;

"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with-

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work ;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications ;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file " means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support ;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act , 1993 (Act No. 85 of 1993);

"tunneling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

1 Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings and reports):

Tender documents
Drawings
ORTIA Works documents

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has prepared this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate provision in their tender submission to comply with all legislative requirements.

The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will conduct Health and Safety audits of the works too.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Client Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards and expectations that the principal contractor and contractors must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resources and competence to deal with the matters detailed herein so that all relevant

contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons as well as assets affected by the construction activities.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client 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 Client which may result from the Contractor failing to comply with the Health and Safety legislation as well as Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off-site activities relating to the project, in particular in transport activities and project dedicated off-site fabrication works and Bulk Mixing Plants.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all sub contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client prior to commencement with construction work.

1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to "definitions" section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to "Client" will apply to their appointed "Client Agent", where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents

- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with the regulations as well as specifications
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor's safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor's health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor's health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the client requires additional work to be performed as a result of a design change or error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Client Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to "definitions" section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

Please note that the designer of temporary works must ensure that:

- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

1.5 PROJECT DIRECTORY		
Project Client	ACSA OR Tambo International Airport Project Manager	Tel:
Contact Person	TBC	Fax:
		Cell:
		e-mail:
Construction Health and Safety Agent	TBC	Tel:
		Fax:
Contact Person		Cell:
		e-mail:
Consulting Engineer	TBC	Tel:
		Fax:
Contact Person		Cell:
		e-mail:

OTHER PARTIES DIRECTORY	
Department of Labour for submission of Annexure 1: Application for Construction Works Permit	Tel: TBC
Will be undertaken by the Clients Health and Safety Agent	
Telecommunications	Cell: TBC
Company: ACSA HOD Maintenance & Engineering	
Contact Name: TBC	
Water, Electricity & Gas	Cell: TBC
Company: ACSA HOD Maintenance & Engineering	
Contact Name: TBC	

1.6 PROJECT DETAILS

Description of Works

Works at OR Tambo International Airport will consist of the following activities:

Runway 03L/21R

- Milling and filling the surfacing of the main runway with BRASO and isolated base repairs
- The shoulders will be rejuvenated and the outer edge of the shoulders will have a drainage improvement applied to it

Runway 03R/21L

- Milling and filling the surfacing of the main runway with BRUTFC

RETS

- The surfacing on the RETs will be milled and filled with the same surfacing as the joining runway.

Ancillary works

- Minor works in the form of electrical works are being implemented on this project and will only be the removal and reinstatement of the base plates and lights on the runways and RETs before and after milling and paving operations.

A full scope of works is defined in section C3 of the tender document.

Anticipated Construction Duration

24 Months (excluding special non-working days)

Provisional Start Date

May 2019

Completion Date

May 2022

1.7 EXISTING ENVIRONMENT

Hazards particular to this project by virtue of location:

Site is located in OR Tambo International Airport .Protection of Aviation and site security are of the utmost importance. All necessary preventative measures must be in place to ensure the safety of Aviation, members of the public and airport personnel, including:

- Demarcation: Works area that will be decommissioned during the construction phase must be demarcated with concrete barriers. All demarcation must be FOD approved and minimize dust on site.
- Safety signage that clearly stipulates access routes, PPE that must be used (hardhats, safety shoes, ear and eye protection and high visibility vests) must be displayed.
- Clearly display emergency numbers and procedures
- Extra care must be taken in marking all entrance and exist routes
- No material may be used that is classified as foreign object debris (ex: danger tape)
- Warning signs to be displayed for all ACSA approved vehicles – this will include speed reduction and allocated parking areas.

Overhead, Above Ground and Underground Services crossing the site:

Overhead: None that will have an impact on works

Underground: Stormwater drainage systems and electrical cables, runway/taxiway edge lighting and also runway closure crosses

Ground level: None that will have an impact on works

Service Drawings available: Please refer to available drawings

Wayleaves required: None that will have an impact on works

Permits required: All workers to have induction training. Permits must be visible at all times

Isolations required: Please refer to tender documents for all requirements by professional team.

Existing structures and surrounding land use (with a significant impact on Health & Safety):

Site is located within OR Tambo International Airport. There are existing shops, restaurants, etc in the vicinity. Works area will be located on Airside and runway areas. Extreme care must be taken to follow ACSA requirements.

Existing ground conditions and ground survey report:

2 way asphalt road

Existing Traffic Systems

All vehicles to adhere to ACSA Airside and security requirements.

Condition: 2 way asphalt road

Restrictions to access: All access will be restricted and indicated by ACSA. Permits will be compulsory to access to works area. Only approved drivers will be allowed access.

Speed restrictions: Airport speed limits to be followed.

1.8 AVAILABLE DRAWINGS

Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS

Significant health and safety hazards identified by Designer and Client Agent:

Access and Security Permits: No person will be allowed to gain access to airside without the proper induction, training and security clearance. Access permits must be visible at all times. Any person failing to comply will be removed from site.

Safety Signs: All signs must clearly indicate access routes and evacuation procedures. Required personal protective equipment for contractors as well as any other person to be clearly visible.

Demarcation: All Demarcation must be FOD approved. Demarcation must ensure the minimizing of noise and dust on site. All safety signs must be displayed as per OHS Act Regulation and Specification requirements.

Traffic plan and accommodation: Principal contractor to provide a method statement of traffic control with regards to entry and exit of construction vehicles and delivery vehicles. All workers to adhere to ACSA Airside traffic rules and regulations at all times.

Working Hours: Extended Contractor Construction hours for work impacting on operations and passenger comfort will be set in accordance with flight schedules and off peak periods. Cartage of waste material from demolition works and deliveries of bulk material will only be allowed during off- peak hours as stipulated. The delivery and erection of unusual loads will be subject to protocols developed to comply with ACSA requirements. Penalties will apply for working outside working hours as deemed appropriate by ACSA.

Other construction hazards expected are as follows:

Asphalting
Cutting Kerbs
Cutting Off Disc
Electric Tools and Electrical Installations
Excavations
Fire
Hand tools
Hazardous Substances
Hot Works
Kerb Laying
Manhole Rings and Pipes Storage
Members of Public
Night Work
Noise and Dust
Painting
Paving (Laying)
Plant/Vehicle and Equipment Operation
Road Construction
Road Marking
Road Working – in or next to (inc Traffic Management)
Underground Services

NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these risks.

ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS (FOR HEALTH AND SAFETY)

Please note that a method statement will be required for all high risk activities on site. This will include but is not limited to:

- Rubble removal and environmental control
- Delivery of materials to designated areas.
- Emergency Evacuation plans and procedures that will follow the Airport procedures
- Closures of runways and bus ways must be conducted by ARFF HOD.
- FOD Demarcation areas

ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: Daily registers to be completed as required

Permit to Enter Excavations: Daily registers to be completed as required

Permit to Work with Electricity: Daily registers to be completed as required

Confined Space Permit: Not applicable for this project

Hot Works Permit: Daily registers to be completed as required

Permit to Work under Power Lines: Not applicable for this project

Blasting: Not applicable for this project

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's permanent Safety Officer must be kept on site in the safety file and non-conformances reported by the Safety Officer to the Contractor's management team. All non-conformances identified by the Safety Officer must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

MEDICAL CERTIFICATE OF FITNESS

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template of the Construction Regulations..

MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's permanent Traffic Safety Officer must be kept on site in the safety file and non-conformances reported by the Traffic Safety Officer to the Contractor's management team. All non-conformances identified by the Traffic Safety Officer must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain and wind. The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC

Access to site by Construction Vehicles: Only approved drivers with permits will gain access to site camp

Access to site by Construction Workers and Visitors: All visitors to make arrangement prior to visiting site to gain access. All visitors to follow ACSA Airside security procedures. Only contractors with permits will be allowed access to site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD

Site camp location and set up

- **Restrictions / requirements:** }

- **Storage areas:** } Contractor to advise in consultation
} with Engineer / Professional Team
- **Security:** }
}

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Please note that toilets should be provided with built in facilities for hand washing:

- **Toilets:** }
}
- **Washing facilities:** }
}
- **Drinking Water:** } Contractor to provide as per Regulations
}
- **Shelter:** }
}
- **Showers:** }
}

PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminates at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

General Fencing of Site: Note that construction sites in built up areas adjacent to public way must be fenced off and have controlled access points. All fencing/hoarding must be painted as per ACSA requirements and be FOD approved.

Warning Notices: Warning signs must be properly displayed as per requirements. Signs to be FOD approved and properly secured.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes, all workers must be clearly identifiable

Safety Harnesses: Yes applicable to this project

Hard Hats: Yes applicable to this project

Reflective Vests: Yes, all workers must be clearly visible

Safety Footwear: Yes, must be worn at all times

Goggles / gloves / ear defenders / respiratory protection: Yes, must be worn at all times as activity requires

Specialist Equipment (eg: for confined Spaces): Yes, must be worn at all times for relevant activities.

HAZARDOUS SUBSTANCES

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

Asphalt , Cement, Petrol, Thinners, Diesel,

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

Certain sections will be deactivated during construction and rehabilitation phases. It is of the utmost importance that all workers stay in designated works areas.

The following Client safety rules and/or requirements are to be observed:

All workers are to receive AIT and AVOP induction prior to commencement of work on site.
No workers will be allowed on site without his/her induction permit.
Other safety rules and requirements to be advised at induction.
Please also refer to tender document.

Restrictions on times, access or other restrictions by Client

Because construction work must be conducted with minimal disruption to airport operations, restrictions may be imposed that will determine the times that work can be conducted and the length of the work shift. Extended Contractor Construction hours for work impacting on operations and passenger comfort will be set in accordance with flight schedules and off peak periods. Cartage of waste material from demolition works and deliveries of bulk material will only be allowed during off- peak hours as stipulated. The delivery and erection of unusual loads will be subject to protocols developed to comply with ACSA requirements. Penalties will apply for working outside working hours as deemed appropriate by ACSA.

1.11 SAFETY FILE RETURN TO CLIENT

The Safety File for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either a hard copy format or on CD.

2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - appoint each contractor in writing for the part of the project on the construction site;
 - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
 - stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the client or the client's agent;

- hand over a consolidated health and safety file to the client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act and Specifications;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time SACPCMP accredited construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor.

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- Include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a client, and such client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

2.4 Construction Work Permit

It must be noted that from August 2018 all projects that meet the following criteria will require a construction work permit to be applied for at least 30 days prior to the work being carried out:

- Exceeds 3560 days
- Will involve more than 3600 person days of construction work
- Works contract is of a value equal to or exceeding forty million rand, or Construction Industry Grading Board (CIDB) grading level 7

It is the client's responsibility to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractors safety file, and the site specific number issued by the Provincial Director must be displayed at the main site entrance.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent and accredited, where applicable, health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Commissioner or Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include i.e:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method;
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the client, client's agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessments where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors and subcontractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. He / she shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents and non-conformances.

2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity, risk assessments, methodology to be followed and an attendance register must be signed by all attendees. This record of who attended and the content of the topic as well as presenter will be kept on the site health a safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on the Risk Assessments, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The 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:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service deliver protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

First Aid box/es must be adequately stocked at all time, accessible and be controlled by a qualified First Aider. If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge and training to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 db; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage.

2.23 Management Of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Specifications and Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;

- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm; and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material and equipment are secured and separated by means of a physical barrier in order

- to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids.

Water environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for –

- preventing persons from falling into water; and
- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- changing facilities for each sex;
- and sheltered eating area.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

Not applicable to this project.

2.33 Temporary works

A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
- all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;
- all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;
- no person may cast concrete, until authorization in writing has been given by the competent person contemplated above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- adequate precautionary measures are taken in order to-
 - secure any deck panels against displacement; and
 - prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person;
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design;
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing or any other relevant document includes construction sequences and methods statements;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

2.34 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
 - may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-
 - the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
 - such an excavation is in stable material: Provided that-
 - permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
 - where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
 - must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
 - must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
 - must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
 - must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working;
 - must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
 - must ensure that every excavation, including all bracing and shoring, is inspected-
 - daily, prior to the commencement of each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after damage to supports; and
 - after rain,
- by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee;
- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
 - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
 - provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
 - must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;

- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

2.35 Demolition Work

Not applicable to this project.

2.36 Tunneling

Not applicable to this project.

2.37 Scaffolding

Not applicable to this project.

2.38 Bulk mixing plant

A contractor must ensure that the operation of a bulk mixing plant is supervised by a competent person who has been appointed in writing and is –

- aware of all the dangers involved in the operation thereof; and
- conversant with the precautionary measures to be taken in the interest of health and safety.

No person supervising or operating a bulk mixing plant may authorize any other person to operate the plant, unless that person is competent to operate a bulk mixing plant.

A contractor must ensure that the placement and erection of a bulk mixing plant complies with the requirements set out by the manufacturer and that such plant is erected as designed.

A contractor must ensure that all devices to start and stop a bulk mixing plant are provided and that those devices are placed in an easily accessible position and constructed in a manner to prevent accidental starting.

A contractor must ensure that the machinery and plant selected is suitable for the mixing task and that all dangerous moving parts of a mixer are placed beyond the reach of persons by means of doors, covers or other similar means.

No person may remove or modify any guard or safety equipment relating to a bulk mixing plant, unless authorized to do so by the appointed person.

A contractor must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with when entering any silo.

A contractor must ensure that a record is kept of all repairs or maintenance to a bulk mixing plant and that the record is available on site to an inspector, the client, the client's agent or any employee.

2.39 Rope Access Work

Not applicable to this project.

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
 - Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting

Not applicable to this project.

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision and keep adequate quantities of SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

2.44 Asbestos

Not applicable to this project.

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Equipment Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate fire fighting equipment (Fire Extinguishers).

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

Proof that an adequate number of employees have been trained in fire fighting must be kept on site.

2.47 Lifting Machinery and Tackle

Not applicable to this project.

2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly as well as keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.50 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from on-site activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are very common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake; and/or
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees is not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms

Not applicable to this project.

2.57 Material Hoists

Not applicable to this project.

2.58 Explosive Actuated Fastening Device

See item 2.50.

Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to prevent members of the public and others being affected by the construction processes, to be aware off and put and maintain preventative measure. The public or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.

OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least fortnightly and before hazardous work is carried out as well as covering applicable risk assessments and method statements	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHS A	Report on Health and Safety Specification and OHS A compliance: a) b) Excavation c) Equipment d) Vehicles
General Inspections	Monthly	Covering: a) Fire fighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering:

		a) General complaints b) Fines c) General incidents d) MSDS' e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHS / Construction Regulations <ul style="list-style-type: none"> • Construction works permit

Key:

OHS – Occupational Health and Safety Act, 1993

ANNEXURE A

The Contractor shall submit the info below in an Annexure 2 prior to construction commencement.

Item No.	Health and Safety Specification Requirement	OHS Requirement	Submission date
1.			
2.			
3.	Assignment of Responsible Person to Manage Building Work via Health and Safety Organogram	Construction Regulations 2014	Before commencement on site
4.	Competency for Health and Safety Positions	Client / Client Agent requirement	Before commencement on site
5.	Compensation of Occupational Injuries and Diseases Act (COIDA) 130 of 1993	COIDA Requirement	Before commencement on site

6.	Occupational Health and Safety Policy	Client / Client Agent requirement	Before commencement on site
7.	Risk Assessment, Safety Plan and Fall Protection Plan, Demolition Method Statement	Client / Client Agent requirement	Before construction work commences

ANNEXURE B - The contractor shall make the following appointments, as required:

Chief Executive Officer (OSHACT 16(1))
Contract Director/Manager (OSHACT 16(2))
Construction Manager (CR 8(1))
Assistant Construction Manager (CR8(2))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Traffic Safety Officer
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Demolition Supervisor (CR14(1))
)
Bulk Mixing Plant Supervisor (CR20(1))
Bulk Mixing Plant Operator (CR20(2))
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Incident Investigator (OSHACT 9(2))

Competent Person – Confined Spaces (GAR 5(1))

BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Construction Manager and Site supervision are responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
1.	Asphalting	Fire Burns to skin Skin disease	• High	<ul style="list-style-type: none"> Suitable fire extinguishers to be in place prior to commencement of works Ensure competent personnel using materials and competent and trained machinery/equipment operators Ensure there is a safe place of work at all times Ensure all personnel wear suitable and sufficient personal protective equipment (PPE) including safety boots, reflective vests and gloves Health and Safety data sheet required
2.	Cutting Kerbs	Saw slipping, Blade disintegrating, Noise and dust	• Medium	<ul style="list-style-type: none"> Only trained operators to use saw and change blades. Personal Protective Equipment must be worn. Gloves, goggles, dust mask and hearing protection. People to be kept away from the work area. Work to cease if people have to pass. Sparks etc. to be directed away from people and any flammable material.
3.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	• Medium	<ul style="list-style-type: none"> Use competent personnel. Hot works control- fire extinguisher, fire watchman. (Permit may be required) PPE to include gloves, eye protection, hearing protection Solid working position. Clear working area Correct grade of blade must be used. Good ventilation to be provided (forced if necessary). Changing of wheels to be by competent persons only Cut off discs must not be used for grinding (grinding disc thicker) Bystanders to wear hearing protection, as applicable
4.	Electrical Commissioning	Electric shock	• High	<p>Personnel to comply with permits to work issued by client</p> <p>Personal protective equipment to be worn by employees to prevent electric shock</p> <p>First aid treatment to be readily available</p> <p>Only competent and trained persons may decommission or commission electrical equipment</p>
5.	Electric Tools and Electrical Installations	Electric shock Fire	• High	<ul style="list-style-type: none"> Electric tools and installations to be in good condition Inspect electric tools before use Do not use electric tools in wet/damp conditions Use personal protective equipment such as insulated gloves

				<ul style="list-style-type: none"> Electrical installations register to be maintained, inspected by competent person
	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
6.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures Inadequate barricading	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Deep excavations / monitor air for toxic fumes Prevent collapse by battering back sides to a safe angle or install temporary support Protect vehicles from falling into excavations – provide barriers, signage, etc as necessary Beware of undermining of other structures (eg: buildings, scaffolds) Record excavation inspections by competent person on daily basis Provide suitable means of access/egress in case of emergency. Excavations formed by explosives must be accompanied by method statement approved by Client Erect and maintain suitable barricading
7.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> No littering on site which could become fire hazard, maintain site in clean condition. No fires to be lit on site. Have a working fire extinguisher at hand at all times. No smoking or naked flame near flammable substances or in unauthorised areas Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices Regular toolbox talks
8.	Flammable Liquids and Gases (Use of)	Fire Explosion	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> No littering on site which could become fire hazard, maintain site in clean condition. Have a working fire extinguisher at hand at all times. No smoking or naked flame near flammable substances or in unauthorised areas Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices Equipment must be in good condition, maintained Personnel using substances must be trained in safe use and risks
9.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	<ul style="list-style-type: none"> Medium 	<p>Ensure:</p> <ul style="list-style-type: none"> Tool is correct for job Tool is in good order and suitably sharp Personnel must be competent/instructed in tool usage and tool safety Lighting is sufficient Access is safe, working platform is secure, leading edge is guarded Operative is wearing all necessary PPE Competent employees
10.	Hazardous Substances	Injuries to workers through use of hazardous substances, eg: injuries to eyes, skin, etc	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc) Know what First Aid measures are Have welfare facilities available for washing of hands, etc

11.	Hot Works	Burns to eyes or other parts of the body	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Personal Protective Equipment to include eye, skin and hearing protection Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required. Hot work permit conditions
	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
12.	Kerb Laying	Nips at joints Crushing by kerbs Caustic burns	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> Impervious gloves and barrier cream to be used to protect hands. Personnel should be aware of safe manual handling techniques when handling kerbs.
13.	Manhole Rings and Pipes Storage	Rolling of rings Collapse of pipes Crushing of persons Stock pile collapse	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> Manhole rings must be stored flat to prevent them being rolled. Banks of pipe stock piles are not to be broken until they are ready for use. Personnel must stand to the side when breaking bands so as not to be hit by falling pipes. Pipes must be wedged to prevent rolling
14.	Members of Public – Protection of	Injury to member of public and road users from site works	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Barriers and signage to be in place Workers must warn away any members of public from the works Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public Traffic turning into site – traffic management and signage as required. Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible Refer to plant risk assessment for details on plant safety precautions NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.
15.	Night Work	Security Lighting	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.
16.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> Wear respiratory and hearing protection Dampen down and minimise dust where possible.
17.	Paving (Laying)	Impact injuries from tile / mallet Caustic burns Sore knees Cuts from cutter	<ul style="list-style-type: none"> Low 	<ul style="list-style-type: none"> Impervious gloves to be worn/ barrier cream to be used Kneelers or similar to be available Personal protective equipment to be worn – for example if saw used to cut pavers

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
18.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Implement traffic protection measures Trained and competent operators must be used Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. Medical certificates of fitness required for construction plant. Crossing of road by construction vehicles or machines must be limited to the practical minimum Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. Wear appropriate protective clothing/equipment, eg: goggles, gloves, ear defenders, etc as appropriate.
19.	Road/Pavement Construction	Risk of being struck by vehicles	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Ensure traffic management measures in place No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African Traffic Signs Manual. Wear reflective waistcoats when working on or near the road or road shoulder as well as any other required personal protective clothing. Crossing of road by personnel must be limited to the practical minimum Use of fencing or other barriers as appropriate
20.	Airport Marking	Contact with moving vehicles Fire	<ul style="list-style-type: none"> Medium 	<ul style="list-style-type: none"> Ensure suitable and sufficient road signs are erected, as applicable Possible road or lane closure may be required – traffic management may be required Fire Extinguisher to be situated in a suitable area, use dry powder or foam
21.	Road Working – working in or next to road	Injury to workers caused by passing traffic Injury to road users and pedestrians by works	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Flagmen to be used where interface with construction plant with passers-by or where hazard posed by delivery vehicles turning into/out of site. Traffic management plan to be approved by Municipality and, if necessary, traffic department No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African Traffic Signs Manual. Use safety signage to warn traffic and pedestrians of construction works

				<ul style="list-style-type: none"> • Where existing walk ways/pavements affected by works, must direct pedestrian traffic away to safe walking area. • Wear reflective waistcoats when working on or near the road or road shoulder as well as any other required personal protective clothing. • Crossing of road by personnel must be limited to the practical minimum • Use of fencing or other barriers as appropriate
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	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
22.	Underground Services	Striking of buried services	<ul style="list-style-type: none"> • Medium 	<ul style="list-style-type: none"> • Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (eg: Municipality or ESKOM) when planning work. • Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. • Comply with the requirements of the safe system of work for underground services. • Where available, locate services with a locator • Hand dig around services

C3.9.2: ENVIRONMENTAL WORK INSTRUCTIONS

THE ACSA ENVIRONMENTAL SPECIFICATION

It is a requirement of the Airports Company South Africa (ACSA)- that all construction works within ACSA airports be undertaken in accordance with the ACSA Environmental Specification

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LIST OF ABBREVIATIONS

ACSA	Airports Company South Africa
AEC	Airport Environmental Committee
EO	Environmental Officer
ES	Environmental Specification
EMS	Environmental Management System for ACSA
ESA	Environmentally Sensitive Areas
SABS	South African Bureau of Standards
SAHRA	South African Heritage Resource Agency
SSSI	Sites of Special Scientific Interest

PART 1: ACSA ENVIRONMENTAL SPECIFICATIONS OVERVIEW

1. PURPOSE OF THE ENVIRONMENTAL SPECIFICATIONS

The purpose of the Environmental Specifications (ES) is to translate the recommendations of the Environmental Management System (EMS) into a contractual environmental specification for application during construction activities.

The Environmental Specifications will be applicable to all construction activities that occur on ACSA owned and/or managed airports. Construction activities include construction of buildings, infrastructure as well as developer / tenant property and rehabilitation works at the airport.

2. IMPLEMENTATION OF THE ENVIRONMENTAL SPECIFICATIONS

The Environmental Specifications is intended for dissemination by ACSA to the “Employer”, who is the party for whom the construction works are to be executed (hereafter referred to as the Employer). The Employer may therefore be ACSA (the relevant Departmental Manager responsible for construction activities), a tenant or a developer with a land lease or another party such as a contractor responsible for developing or rehabilitation of the site or sites at the airport.

The Employer shall ensure that the Environmental Specification is included in the Tender Document(s) issued to the prospective Contractor and is also responsible for appointing/designating, in writing, a Responsible Person for the construction works.

The Responsible Person would manage the requirements outlined in the Environmental Specifications on behalf of the Employer. The Contractors shall incorporate the requirements of the ES in their tender submissions to the Employer and are responsible for implementing the ES on a daily basis.

The Environmental Officer (EO) will be responsible for updating the ES as required, auditing the implementation of the ES for each construction project and for maintaining the document control and record systems associated with it.

The Environmental Specifications report has been structured to be incorporated into a standard engineering tender document as the Environmental Particular Specification.

A ‘Particular Specification’ is the terminology used for a specification that covers activities that are not adequately covered in the standardised SABS 1200 series specifications for engineering contracts, or where the specification is sufficiently detailed to make it inappropriate for inclusion as a variation or addition to a standardised specification.

The Environmental Specification is a generic document applicable to construction projects at all ACSA airports. The majority of the specifications within the ES will apply to all construction work, although it is anticipated that variations to this specification may need to be included for some specific developments. Variations would be made by the Environmental Officer, prior to the issue of the ES to the Employer.

PART 2: ENVIRONMENTAL Particular SPECIFICATIONS

Index to Environmental Particular (EP) Specifications

Clause	Description
EP1	INTRODUCTION
EP2 EP2.1 EP2.2	ORGANISATIONAL REQUIREMENTS Organisational overview and structure Roles and responsibilities
EP3	METHOD STATEMENTS
EP4 EP4.1 EP4.2 EP4.3 EP4.4 EP4.5 EP4.6 EP4.7 EP4.8 EP4.9 EP4.10 EP4.11 EP4.12 EP4.13 EP4.14 EP4.15	GENERAL SITE PROCEDURES Demarcation of Environmentally Sensitive Areas (ESAs) Location of camp and depot Demarcation of the site Ablution Facilities Domestic waste water Refuse Protection of the fauna and flora Defacement of natural features Protection of archaeological and paleontological sites Effluent and storm-water management Dust control Noise control Materials use, handling, storage and transport Emergency procedures Social issues
EP5 EP5.1 EP5.2 EP5.3	SITE CLEARANCE Removal of top soil Stabilisation of steep slopes Removal of alien vegetation
EP6 EP6.1 EP6.2	SITE REHABILITATION Scope Landscaping and preparation for re-vegetation
EP7 EP7.1 EP7.2 EP7.3 EP7.4 EP7.5 EP7.6	MANAGEMENT AND MONITORING: Monitoring and reporting Environmental awareness training Non-conformance and corrective actions Documentation Incentives and penalties External audit
EP8	MEASUREMENT AND PAYMENT

EP1 INTRODUCTION

The ES has been prepared and is to be implemented as part of the Environmental Management Systems for ACSA.

The ES provides specifications that the Contractor shall adhere to, in order to minimise adverse environmental impacts and optimise opportunities associated with construction activities.

The ES is provided to the Contractor at the tender stage so that the costs of implementing the ES are included into the contract cost and so that the Contractor is aware of his environmental responsibilities before commencing work.

The aim of this ES is to ensure that environmental management of site activities is integrated into the other management systems implemented by the Contractor (e.g. quality management, health and safety). For this reason, the ES includes a requirement for the Contractor(s) to develop their own system (i.e. roles, responsibilities and timing) for ensuring that the requirements of the ES are met, and that the Contractor checks, by means of an internal audit, that this system is operating effectively.

EP2 ORGANISATIONAL REQUIREMENTS

EP2.1 Organisational Structure

This section outlines the required management structure for the administration of the ES, with particular emphasis on the roles and responsibilities of key individuals.

The organisational structure for the implementation of the ES is presented in Figure 1 and should be viewed in conjunction with the roles and responsibilities below.

EP2.2 Roles and responsibilities

EP2.2.1 Airports Company South Africa

Airports Company South Africa is ultimately responsible for ensuring effective environmental management at the airport in terms of the scope of the Environmental Management Systems.

EP2.2.2 Environmental Officer (EO)

The Environmental Officer has been appointed by ACSA, and is responsible for monitoring the implementation of the requirements of the Environmental Specification by the relevant parties as specified.

The Environmental Officer shall:

- Review and approve in writing valid method statements;
- Inspect the Contractor's site to check compliance with method statements and the requirements of the ES (at least weekly and more frequently if thought to be warranted by the EO) and maintain inspection reports on file;
- Meet with the Responsible Person for the developer or tenant, whereby the Responsible Person reports on the implementation of the ES (at least monthly) and keep a record of minutes of the above meetings;
- Provide material / manuals and assistance to the Responsible Person for the initial environmental training sessions; and
- Report in writing any problems related to conformance with the ES which cannot be resolved in co-operation with the relevant Responsible Person to ACSA Managers or the relevant developer / tenant.

EP2.2.3 Employer

The Employer shall:

- Include the ES, with any revisions, in any tender document related to construction activities on site;

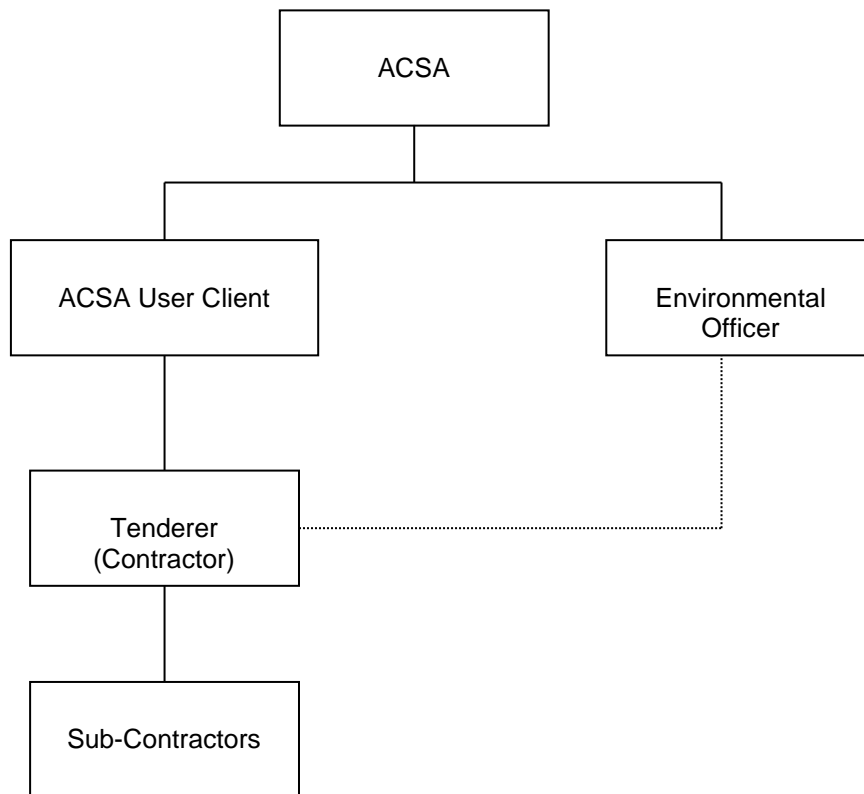
- Designate in writing a Responsible Person for the proper implementation of the ES; and
- Send a copy of the letter of appointment of the Responsible Person to the EO.

EP2.2.4 Responsible Person

The Responsible Person for each building site or infrastructure installation shall:

- Develop a system to ensure that the ES is effectively implemented;
- Audit this system so that he/she can demonstrate to the EO that the ES is being effectively implemented;
- Ensure that Contractors staff, sub-contractors, suppliers etc. receive appropriate environmental awareness training prior to commencement of work on the project and maintain records of training. It is anticipated, though not a requirement, that the Responsible Person will deliver training sessions;
- Ensure that responsible persons for sub-contractors are designated to carry out the requirements of the Environmental Specifications
- Submit method statements to the Environmental Officer for approval as specified in the Environmental Specifications and maintain approved method statements on file; and
- Have sufficient authority to issue site instructions to the Contractors staff on their site. It is probable, though not a requirement, that the Responsible Person will be the Engineers Representative.

Figure 1: Organisational structure showing lines of responsibility and communication during the construction phase at the airport.



EP3 METHOD STATEMENTS

The Contractor shall submit a written method statement to the Responsible Person for approval, covering those activities which are identified (in this document and/or by the Environmental Officer), as being potentially harmful to the environment.

Method statements indicate how compliance with the Environmental Particular Specification will be achieved.

The 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 Environmental Officer and Responsible Person.

The method statement shall be submitted at least five working days prior to expected commencement of work on an activity, to allow the Responsible Person time to study and approve the method statement. The contractor shall ensure ACSA that the activity is conducted according to the method statement which will be approved in writing by the ACSA successful tenderer (and also signed by the ACSA Environmental Officer), which shall be done within five working days of receipt.

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 Environmental Officer and Responsible Person. The EO and Responsible Person must retain records of any amendments and ensure that the most current version of any method statement is being used.

EP4 GENERAL SITE PROCEDURES

EP4.1 Demarcation of Environmentally Sensitive Areas

Before construction commences there needs to be confirmation by ACSA's Environmental Officer that the vegetation in the area to be impacted by construction activities is not identified as an Environmentally Sensitive Area (ESA). However, should Environmental Sensitive Areas be identified during the construction period the following actions would have to be taken to minimize adverse impacts:

- Environmentally Sensitive Areas, shall not be entered or used for any purpose unless a written motivation has been submitted to the EO by the Responsible Person, and written approval has been obtained from the EO;
- The Contractor shall exercise special care when working close to the ESA's in order to avoid damage or physical disturbance of these areas. The EO may instruct the Responsible Person to restrict the number of construction personnel and equipment operating near Environmentally Sensitive Areas (ESA's);
- Damage caused to ESAs by the Contractor shall be cause for the Contractor to make good any damaged areas to the written satisfaction of the EO;
- The Contractor shall note the proximity to the site of any designated ESAs. The Contractor shall fence any ESAs located within 20-m of the site boundary. The fencing shall extend along the boundary of the ESA for sufficient distance to ensure that the location of the ESA is obvious from the Contractor's site and from the approach to the Contractor's Site; and
- The Contractor shall make provision for the demarcation of ESAs with fencing to the following specifications:

Posts shall be wooden droppers or steel standards where the ground is too hard for wooden droppers to be driven in;

- The posts shall be long enough and spaced closely enough to support a strand of 12-gauge wire at 750- mm above the ground level; and
- The top 300-mm of the posts shall be painted white for easy visibility.

EP4.2 Location of camp and depot

The Contractor's Camp and Materials Storage Area shall be located at a position approved by the Responsible Person. 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.

EP4.3 Demarcation of the site

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 method of demarcation and the location of the demarcated area shall be determined by the Contractor and approved by the Responsible Person before any work being undertaken. The Contractor shall ensure that all 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/her own expense to the satisfaction of the Responsible Person.

If additional areas (e.g. for lay down, rest areas) are required, these must be approved in writing by the Responsible Person. The Contractor is advised that it may take approximately one week to obtain such permission from the Responsible Person.

Suitable temporary fencing may need to be erected during construction to minimise the risk of injury to the public, and animals.

EP4.4 Ablution Facilities

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

Toilets with chemical disinfectants 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 EO shall require the Contractor 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 open areas, rivers or other areas for ablution 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.

EP4.5 Domestic waste water

Waste-water from any other ablution 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.

EP4.6 Refuse

Refuse refers to all solid waste, including construction debris (e.g. wrapping 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 Responsible Person 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 if so instructed by the Responsible Person. 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 recommended. 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 materials.

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 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 permitted hazardous waste disposal site.

The EO shall be consulted about, and agree to, the method of storage and disposal of hazardous waste.

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

EP4.7 Protection of fauna and flora

All fauna 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. Offenders may be prosecuted in terms of the Animals Protection Act 71 of 1962.

EP4.8 Defacement of natural features

Defacement of any features outside of the construction site shall not occur without the prior written permission of the Responsible Person. Any features defaced by the Contractor shall be restored to the satisfaction of the Responsible Person.

EP4.9 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 Responsible Person. The Responsible person 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 from the National Monuments Council. Costs incurred will be for the Employer's account.

EP4.10 Effluent and storm-water management

EP4.10.1 General

The Contractor must ensure that pollution of the ground or surface water does not occur as a result of site activities. Pollution could result from the accidental release of contaminated run-off from construction camps, discharge of contaminated construction water, chemicals, oils, fuels, sewage, run-off from stockpiles, solid waste, litter, etc.

EP4.10.2 Run off from construction camps

The Contractor shall ensure that polluted run-off (excluding silt "pollution"), such as run-off from construction camps where equipment is cleaned and/or serviced, fuel stores, workshops, etc. is not discharged overland. The Contractor may direct it into the local sewerage main, with the written permission of the Responsible Person. Alternatively, the Contractor shall erect an earth/brick berm 0,5 m high around such areas and shall collect all run-off from these areas and store it in a conservancy tank for removal from the site. The Contractor shall ensure that silt-laden water is not discharged directly into any surface watercourses (i.e. vleis, etc.), and shall take suitable measures to prevent this.

Natural run-off shall be diverted away from any camps towards the storm-water drains where these are available. Special care must be taken in areas susceptible to erosion, e.g. steep slopes. The Contractor shall ensure that excessive quantities of sand, silt and silt-laden water do not enter the storm-water drain system, or any surface watercourse. The Contractor shall take appropriate measures, e.g. the erection of silt traps, or drainage retention areas, to prevent silt and sand entering drainage or watercourses. Any partial or complete blockage of the storm-water drainage system shall be cleared by the Contractor at his / her own expense.

EP4.10.3 Discharge of construction water

Construction water refers to all water dirtied as a result of construction activities.

The Contractor may discharge silt laden water overland and allow this water to filter into the ground. However, s/he shall ensure that he does not cause erosion as a result of any overland discharge.

The Contractor may discharge limited quantities (less than 50L) of cement-laden water overland, i.e. washings from trowels, wheelbarrows and the like.

Water from washing large 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.

Trucks delivering concrete shall not wash the trucks or the chutes on the site. All washing operations shall take place off-site at a location where wastewater can be disposed of in the correct manner.

EP4.10.4 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 Responsible Person. 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 Responsible Person. 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.

EP4.10.5 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, which is intended 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 Responsible Person/ECO 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 ECO and relevant authorities, if appropriate.

EP4.11 Dust control

The Contractor shall be responsible for the continued control of dust arising from his/her 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, due to water loss through evaporation. The use of water carts is preferred.

The Contractor shall inform the Responsible Person 48 hours in advance of anticipated "unavoidable" dust-generating activities. The Responsible Person and/or ECO may inform adjacent land users, tenants and communities about the possibility of dust pollution, and the approximate duration of the problem.

EP4.12 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 Contractor shall inform the Responsible Person 48-hours in advance of anticipated "unavoidable" noise-generating activities. The Responsible Person and/or Environmental Officer may inform adjacent land users, tenants and communities about the possibility of noise pollution and the approximate duration of the problem.

EP4.13 Materials use, handling, storage and transport

Procedure for material handling must be discussed with and approved by the Responsible Person prior to commencement of this activity.

EP4.13.1 Use of cement/concrete

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

EP4.13.2 Fuel storage and use

Tanks containing fuels shall have lids and shall remain firmly shut. Only clean, empty tanks may be stored on the bare ground. Fuel stores shall be placed on a bunded sealed base - the bunds shall have a volume of 110% of the volume of the largest tank in the storage area. Any waste-water or spilled fuel collected within the bund shall be disposed of as hazardous waste.

The Contractor shall take all the necessary precautions to prevent fires or spills. No smoking shall be allowed in the vicinity of the fuel stores. Failure to adhere to this specification shall be cause for a spot fine being imposed on the offender.

The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

EP4.13.3 Hazardous materials

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous materials. If necessary, the Contractor shall obtain the advice of the manufacturer with regard to the safe handling of hazardous materials. Any claims against the Contractor shall be for his/her account.

The Contractor shall provide the Responsible Person with a list of hazardous substances on site, together with storage procedures for these materials.

The Contractor shall ensure that there is an emergency procedure to deal with accidents and incidents (e.g. spills) arising from hazardous substances. The Contractor shall report major incidents (spills in excess of 50 litres) to the Responsible Person immediately.

The Contractor shall maintain a register of spills or incidents involving hazardous materials, as well as measures taken.

The Contractor shall ensure that information on all hazardous substances is available to all personnel on site. The Contractor shall furthermore be responsible for the training of all personnel on site who will be handling the material about its proper use, handling and disposal.

EP4.13.4 Transport of materials outside the site

The Contractor shall comply with all the applicable local, regional and national by-laws with regard to road safety and the transport of materials, especially hazardous and/or toxic materials. Any claims against the Contractor shall be for his account.

The Responsible Person shall provide the Environmental Officer with a schedule of the proposed transportation of significant quantities of hazardous material onto the site, before commencing work on site. The Environmental Officer may request further details or notifications of specific material movements if considered necessary.

EP4.14 Emergency procedures

EP4.14.1 General

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 Responsible Person shall advise the EO of any emergencies on site, together with a record of action taken.

EP4.14.2 Fire

The Contractor shall take all the necessary precautions to ensure that fires are not started as a result of his/her 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.

EP4.15 Social issues

EP4.15.1 Third party or public complaints

The Environmental Officer shall be responsible for responding to queries and/or complaints and may request assistance from the Responsible Person in this regard.

The Environmental Officer shall notify the Responsible Person of any complaints lodged by a third party, and request appropriate information and measures to address such complaints. The Environmental Officer shall be responsible for maintaining a complaints register in which all complaints are recorded, as well as action taken. This register shall be available to the Responsible Person and the Contractor on request.

EP4.15.2 Information sharing

The Responsible Person and/or the Contractor may need to make staff available for formal consultation with affected parties for the purpose of explaining the construction process and answering queries if necessary.

EP5 SITE CLEARANCE

EP5.1 Removal of topsoil

Following removal of vegetation from the site, all topsoil shall be removed (up to a maximum of 30-cm depth) and stock-piled 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 Responsible Person.

EP5.2 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. Where re-vegetation of slopes is undertaken, this shall be in accordance with the specification provided in EP6.

Slopes that are susceptible to accidental damage during construction shall be protected to reduce the risk of disturbance.

Any erosion that does occur must be reinstated at the Contractor's cost.

EP5.3 Removal of alien vegetation

The Contractor shall clear all alien vegetation from areas within the demarcated site that are to be landscaped or which fall within open space or buffer zones (e.g. pipeline routes, road fringes).

EP6 SITE REHABILITATION

EP6.1 Scope

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. The Contractor shall re-vegetate such areas in accordance with the specification provided below.

The Contractor shall stabilise, by straw rot ovation or other means, 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.

EP6.2 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 re-vegetation is commenced, the Contractor shall, at his own cost, loosen the crust by scarifying to a depth of 150-mm.

EP7 MANAGEMENT AND MONITORING

This section focuses on the systems and procedures required to ensure that the environmental specifications are effectively implemented. The emphasis is on monitoring, training and penalties/incentives aimed at ensuring compliance with this document. Suitable documentation and external checks are crucial to ensure compliance and methods to achieve this are also presented in this section.

EP7.1 General Inspection, Monitoring and Reporting

The Responsible Person shall:

- Inspect the site on a daily basis to ensure that the environmental specifications are adhered to.
- Provide the Environmental Officer with a monthly written report, detailing both compliance with the Environmental Specifications as well as general environmental performance.
- Maintain a record of major incidents (spills, impacts, complaints, legal transgressions etc) as well as corrective and preventive actions taken, for submission to the Environmental Officer at scheduled monthly report back meetings.
- Conduct regular internal audits to ensure that the system for implementation of the ES is operating effectively. The audit shall check that a procedure is in place to ensure that:
 - the Method Statements and Environmental Specifications being used are the up-to-date versions;
 - variations to the Environmental Specifications/Method Statements and non-compliances and
 - corrective action are documented;
 - appropriate environmental training of personnel is undertaken; and
 - emergency procedures are in place and effectively communicated to personnel.

- Provide the required information to the Environmental Officer during external audits conducted, as part of the Environmental Management Systems auditing procedure. The information required will include the reports of internal audits conducted by the Responsible Person.

EP7.2 Environmental awareness training

EP7.2.1 Environmental awareness training prior to commencing work

An initial environmental awareness training workshop shall be held prior to any work commencing at the airport. The Responsible Person shall organise (deliver) the workshop and will record the names of those attending. It is recommended that the Contractor allow one hour for this workshop. The workshop shall be attended by all site staff, including sub-contractor's staff.

The Contractor is responsible for ensuring that personnel commencing work on site after the start of the contract (who therefore miss the initial workshop) are also made aware of the environmental procedures before commencing work.

The emphasis should be on any (potential) environmental impacts relating to the construction activities to be undertaken on site and the related environmental precautions, which need to be taken to avoid or mitigate these impacts. The contractual obligation to comply with the specifications in the Environmental Specifications must also be emphasised (some training material will be specific to certain sites or tenders).

A general environmental awareness programme aimed at all employees of the Contractor, sub-contractors and suppliers is available from the Environmental Officer.

EP7.2.2 Additional environmental awareness sessions

If there are persistent breaches of the specifications contained in the Environmental Specification and/or if new environmental issues arise during the course of construction, the Environmental Officer may require additional environmental training sessions. Attendance at these sessions will be determined by the EO, in consultation with the Responsible Person. The Contractor shall make provision for one hour a month for attendance (of construction staff) at these meetings.

EP7.3 Documentation

The Responsible Person shall ensure that all records of spills, pollution incidents, spot fines, training details etc. are copied to the Environmental Officer for his/her records. All documents shall be open for inspection by the Airport Environmental Committee (AEC).

The Environmental Officer shall ensure that a register of public complaints and action taken thereon, plus the relevant documentation from the Contractors, is maintained.

EP7.4 Incentives and penalties

EP7.4.1 Incentives

The Environmental Officer may identify a Contractor that is best implementing this Environmental Specifications and may make a (monthly) award to, or acknowledge, that Contractor.

EP7.4.2 Penalties

Spot fines shall be imposed by the Environmental Officer 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 spot fine, and furthermore 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 Environmental Officer accordingly.

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

Spot fines shall be between R500 and R2000, depending upon the severity of the infringement. The decision on how much to impose will be made by the Environmental Officer, and will be final. In addition to the spot fine, the Contractor shall be required to make good any damage caused as a result of the infringement at his/her own expense.

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

- moving outside the demarcated site boundaries;
- littering of waste on site and surrounds and 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 Environmental Officer.

The Responsible Person may also order the Contractor to suspend part or all the works if the Contractor repeatedly causes damage to the environment by not adhering to the ES (i.e. more than 3 cases of infringements). 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.

EP7.5 External audit

Regular scheduled audits of the EMS will be conducted. However, this is not a dedicated audit of the implementation of this document (which is one of many components of the EMS). Nevertheless, it is anticipated that implementation of the terms and specifications contained in this document will be periodically audited as part of the EMS audit.

All documentation held by the Environmental Officer shall be available for the EMS audit at all times. Contractors shall also be required to provide any information required by the EMS auditors.

AIRSIDE PROJECT/WORK SAFETY PLAN

(OHS and Environmental Safety Plans to be submitted separately)

Contractor:

Project/work:

ACSA Dept.

- 1 Disruption to normal operations (Minimise)**
 - a. Hours of work
 - b. Information to Stakeholders in writing
 - c. NOTAM

- 2 Access**
 - a. Access point and route
 - b. Marking of Route
 - c. Movement area crossing points
 - d. Vehicle / Equipment control
 - e. Communication facilities
 - f. Escorts

- 3 Height restrictions**
 - a. Vehicles / Cranes
 - b. Operating heights of crane jibs

- 4 Aircraft movement area inspections : F&RS/Airside Safety**
 - a. Frequency
 - Areas open to a/c use
 - Areas closed to a/c use
 - b. Cleaning / sweeping

- 5 Site inspection**
 - a. Adherence to safety requirements

- 6 Marking of obstacles**
 - a. Hoarding / demarcation of site
 - b. Markings
 - c. Lighting

- 7 Safety training**
 - a. Airside Inductions
 - b. AVOP
 - c. OHS
 - d. Environment

- 8 Security Permits**
 - a. Personnel
 - b. Vehicles / equipment inspections

- 9 **PPE**
 - a. Reflective jackets / vests
 - b. Ear protections
- 10 **Hot work permit – Fire & Rescue**
- 11 **Contractor staff briefings** (proof may be requested)
 - a. Precise area in which work may be done
 - b. Routes to be followed to and from working area
 - c. R/T procedures to be used
 - d. Escorting procedures and briefs
 - e. Safety precautions to be observed, eg:
 - Maintenance of listening watch
 - Use of look-outs
 - f. Reporting procedure to be followed on completion of work
- 12 **Written warning to contractor of possible hazards to personnel**
(Attach copy)
eg: - Jet blast; Noise
- 13 **List of mechanical equipment**
(Brief descriptions of equipment may be requested to enhance understanding.)
- 14 **Schedule of Contractors**
- 15 **General comments**

Compiled by:

Signature:

Date:

APPENDIX A

SITE INSPECTION PROTOCOL FOR CONSTRUCTION ACTIVITIES

The ACSA: Environmental Officer should audit one or more method statement per site (if applicable), as well as the general requirements of the Construction ES (see checklist overleaf) during a site inspection.

Project reference:.....
Contractor:.....
Responsible Person:.....
Date:.....

Method statement(s) audited:

Tick one box:

- method statement properly implemented
- method statement not properly implemented

If method statement not properly implemented, describe deviations/omissions/problems:

- 1.
- 2.
- 3.

Describe actions/plans to ensure proper implementation of the method statement:

- 1.
- 2.
- 3.

Other observations about implementation (if any):

- 1.

Signed..... (ACSA ECO) Signed..... (Responsible Person)

Date: Date:

SITE INSPECTION PROTOCOL FOR CONSTRUCTION ACTIVITIES

ISSUE	REQUIREMENT FOR COMPLIANCE		COMMENTS/ACTIONS
Site	Site boundary is clearly demarcated and activities undertaken within boundary.		
Toilets	Adequate toilets have been provided. These are secure and well maintained.		
Wastewater	Waste water is discharged to the reticulated system or to a conservancy tank which is emptied as required.		
Refuse	Site is generally tidy and free from litter.		
	No burning or burying waste.		
Natural features	No defacement of natural features to be protected in the site or the immediate surrounding area.		
Runoff	No polluted runoff from the site.		
	No pollution or erosion resulting from runoff of construction water.		
Fuels & chemicals	Servicing & fuelling occurs in designated place. No significant ground contamination.		
	Drip trays in place for pumps and other machinery in fixed location for at least 2 days.		
	Fuel stores on sealed base and adequately bunded.		
	Hazardous materials stored in an enclosed area or as agreed in method statement and appropriately labelled.		
	Spill clean up materials available on site.		
	No significant spillage.		
Dust	No excessive dust which could cause a nuisance to employees or the public.		
Fire	No fires on site. Use of closed stoves or fires limited to construction camps.		
	Fire extinguishers available near any welding or metal cutting.		
Topsoil	Topsoil removed and stockpiled < 2m high.		
Stabilisation	Slopes stabilised as necessary to prevent erosion.		
Monitoring	Responsible Person's record of major incidents is up to date.		
Training	All Contractors' personnel are aware of environmental responsibilities.		
	Records of training maintained by Responsible Person.		

C3.9.3: REQUIREMENTS OF GOVERNMENT'S PROGRAMME FOR BROAD-BASED BLACK EMPOWERMENT

C3.9.3.1 SCOPE

1. GOVERNMENT POLICY

There is a compelling need to elevate development of previously disadvantaged individuals and enterprises, and leadership by ACSA is required to establish the framework for the development of previously disadvantaged individuals and enterprises. (based on CIDB NCDP 2011).

The objective of the NCDP is to promote equity ownership across the different contracting categories and grades, as well as improving skills and performance in the delivery and maintenance of capital works across the public sector.

2. APPLICABLE LEGISLATION

All tenders will be considered with specific reference to applicable legislation in force from time to time and which are specifically applicable to organs of state for example the following:-

- 2.1 Public Finance Management Act No. 1 of 1999;
- 2.2 Preferential Procurement Policy Framework Act No. 5 of 2000;
- 2.3 The Constitution of South Africa
- 2.4 Broad-Based Black Economic Empowerment Act No. 53 of 2003
- 2.5 National Small Business Amendment Act No. 26 of 2003

C3.9.3.2 DEFINITIONS

- 1) **BBBEE**
Broad-Based Black Economic Empowerment
- 2) **BO**
Black Owned
- 3) **BWOYO**
Black Woman Owned, Youth Owned
- 4) **CIDB**
Construction Industry Development Board
- 5) **CPG**
Contract Participation Goals
- 6) **EME**
Exempted Micro Enterprise
- 7) **ISO**
Quality management systems standards
- 8) **JV**
Joint Venture
- 9) **NCDP**
National Contractors Development Programme
- 10) **PPFA**
Preferential Procurement Policy Framework Act
- 11) **PWPDO**
Persons with Physical Disability Owned
- 12) **SADC**

- 13) Southern African Development Community
TSS PPM
Technical Services Solutions – Project Portfolio Management

TABLE A

Size	Total Gross asset value (fixed property excluded) (less than)	Total annual turnover (less than)	Total full time equivalent of paid employees (less than)
Medium	R 5 m	R 26 m	200
Small	R 1 m	R 6 m	50
Very Small	R 0.5 m	R 3 m	20
Micro	R 0.1 m	R 0.2 m	5

C3.9.3.3 CONTRACT PARTICIPATION

Airports Company South Africa aims to contract predominantly with Empowering Suppliers per the definition in P010 004P (ACSA internal transformation policy) were this relates to:

- an increase in local production,
- raw material beneficiation
- retention and employment of black people
- the transfer of skills to black owned EME's and QSE's.

1. Contract Participation Goals (CPG)

CPG refers to the extent to which the contracted resources achieve predetermined transformation objectives, expressed as a percentage (%) of the contract value. Bidders are expected to achieve this target by the end of the project.

2. Bidders are to submit to submit a transformation proposal meeting the CPG target for all contracts over R1m including VAT.
3. CPG for this contract will be at 50% which will consist of the following B-BBEE elements:
 - a)
 - 3.1. Equity (Target 50%): 40% weighting.
 - 3.2. Management (Target 50%): 40% weighting
 - 3.3. Skills development: 5% weighting
 - 3.4. Enterprise and supplier development: 10% weighting
 - 3.5. Socio economic development: 5% weighting
4. To facilitate achievement of targets set out in 3, and transfer of skills, the tenderer **must** subcontract more than 30% of the contract value to CIDB Grade 2 to 6 CE contractors that are women owned, youth owned, PWPDO, or allocate to EME, QSE that are 51% black owned entities.
5. In the event that the Contractor/consultant fails to substantiate that any failure to achieve the contract participation goal relating to the granting of a preference was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor/Consultant shall be liable to pay to the Employer a financial penalty calculated in the following manner:
 - b)
 - c) $P = (0,15 \times (D - Do) \times CA) / 100$
 - d)
 - i. where D is the tendered contract participation goal percentage;
 - ii. Do is the contract participation goal which the Employer's representative, certifies based on the credits passed, as being achieved upon completion of the contract;
 - iii. CA is the contract amount.
 - iv. P is the monetary value of penalty payable
 - e)

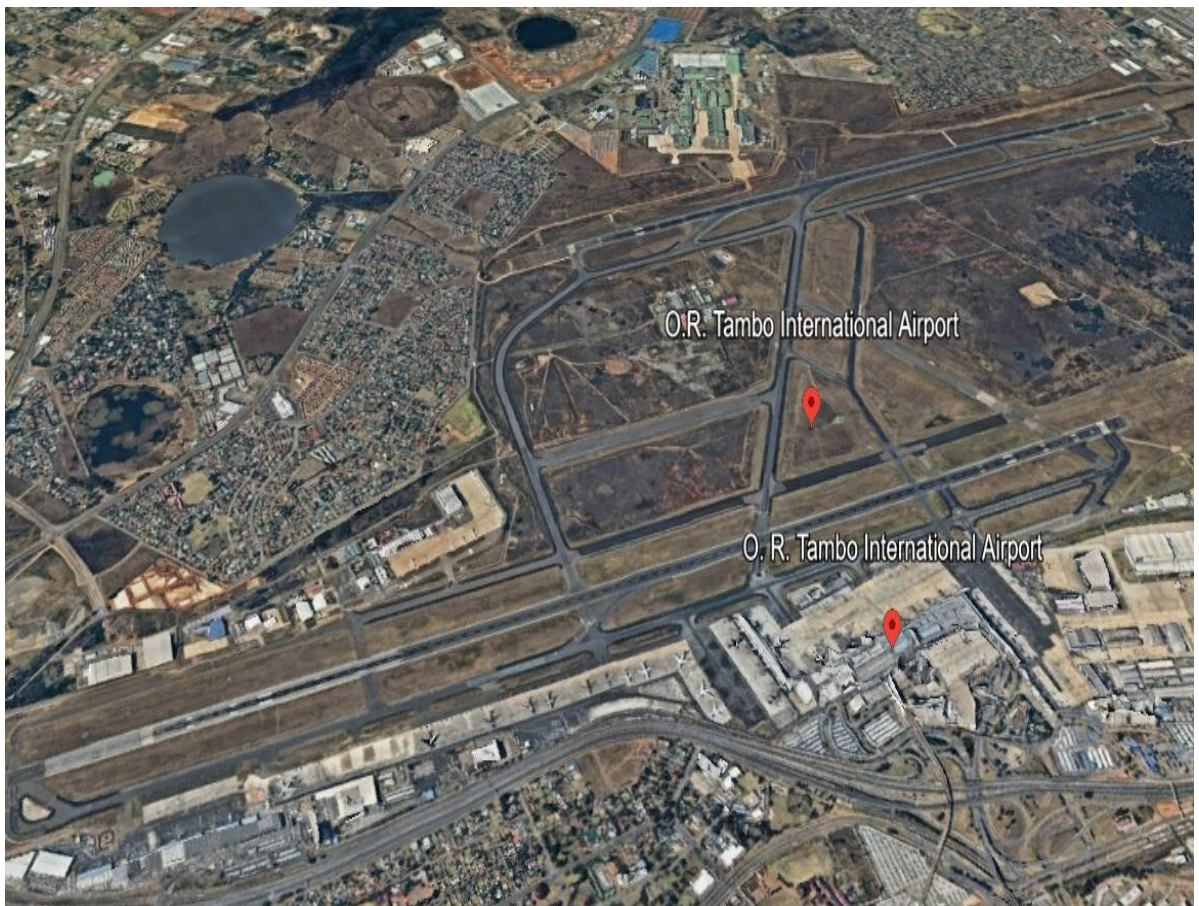
No financial award is due for over performance on CPG.

Transformation score sheet (C3.7.3.3(6))						
<i>(Only Populate the white blackcells)</i>						
Ownership target 51%	Method 1	% of contract executed by prime contractor	% Black Ownership	Total CPG/Element	Weighting CPG	Contract CPG
	Method 2	% contract being executed by targeted JV Partners	% Black Ownership		40%	
	Method 3	% on contract being executed by targeted subcontractor	% Black Ownership			
Management target 51	Method 1	% of contract executed by prime contractor	% Black Management	Total CPG/Element	Weighting	
	Method 2	% contract being executed by targeted JV Partners	% Black Management		40%	
	Method 3	% on contract being executed by targeted subcontractor	% Black Management			
Skills Development	Method 2	% contract being executed by targeted JV Partners	% Black Management	Total CPG/Element	Weighting	
	Method 3	% on contract being executed by targeted subcontractor	% Black Management		5%	
ESD	Method 2	% contract being executed by targeted JV Partners	% Black management	Total CPG/Element	Weighting	
	Method 3	% on contract being executed by targeted subcontractor	% Black management		10%	
SED	Method 2	% contract being executed by targeted JV Partners	% Black Management	Total CPG/Element	Weighting	
	Method 3	% on contract being executed by targeted subcontractor	% Black management		5%	
				CPG Score:		

PART C4: SITE INFORMATION

C4.1 Location of The Project

The site is situated at the OR Tambo International Airport, Access to the airside portion of the works areas is restricted and a permit system is in operation.



ANNEXURES

**Annexure 1: ACSA Standards and Guidelines for Fire Detection System & Gaseous
Suppression System**