AIRPORTS COMPANY
SOUTH AFRICA

# AIRPORTS COMPANY SOUTH AFRICA, CTIA

## TENDER REFERENCE NO.: R F Q 7 3 5 3 1

## DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS

# NEC 3: PROFESSIONAL SERVICES CONTRACT (PSC)

**Between** **AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED**

**Applicable at Cape Town International Airport**

(Registration Number: 1993/004149/30)

and .....

(Registration Number: _____)

for **DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS**

# DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS

## NEC 3: PROFESSIONAL SERVICES CONTRACT (PSC)

# Part C1: Agreement 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:

**DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS**

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

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

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

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

(In words).

**R** _____ **including VAT** (in figures)

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

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

| | | |
|---|---|---|
| Signature(s) | | |
| Name(s) | | |
| Capacity | | |
| **For the tenderer:** | | |
| | | |
| Name & signature of witness | | Date |

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

## 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 **Consultants** 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 |

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 a copy of this document which contains the Employer's signature, including the Schedule of Deviations (if any). Unless the tenderer (now **Consultant)** within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

| | | |
|---|---|---|
| Signature(s) | ..... | ..... |
| Name(s) | ..... | ..... |
| Capacity | ..... | ..... |
| **for the Employer** | Airports Company South Africa (ACSA) SOC,<br>Cape Town International Airport,<br>Private Bag X9002,<br>Cape Town,<br>7525 | |
| Name & signature of witness | ..... | Date |

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

# Schedule of Deviations

1 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

2 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

3 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

4 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 (ACSA)<br>SOC,<br>Cape Town International Airport,<br>Private Bag X9002,<br>Cape Town,<br>7525 | |
| Name & Signature of witness | | |
| Date | | |

# Part C1.2a Contract Data

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

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

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

1 **General**

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

**P: Percentage Based Contract** based on cost of works according to Government Gazette "Guidelines and Processes for Estimating Fees for persons in Terms of the Engineering Profession Act" dated 04 December 2014

**Dispute resolution Option clause: W1.**

**Secondary Options (incorporating amendments)**

**X2 Changes in the law.**

**X3 The exchange rates are used to convert from the currency of the contract to other currencies.**

**X7 Delay damages**

**X9 Transfer of rights**

**X10 Employer's *Agent***

**X11 Termination by the Employer**

**X18: Limitation of liability**

**Z: *Additional conditions of contract***

of the NEC3 Professional Services Contract, April 2013.

The *project stages* are as per FIDPM framework:

| ***Project stage*** | | **Key deliverable at end of each stage as described in the Scope and accepted by the *Employer*** |
|---|---|---|
| **No** | **Description** | |
| 1 | Inception | Not required |
| 2 | Concept and Viability | Preliminary Design and Concept Report |
| 3 | Detailed Design | Design Development Report |
| 4 | Documentation and Procurement | Not Applicable |
| 5 | Contract Administration and Inspection | Not Applicable |
| 6 | Handover | Not Applicable |
| 7 | Close-out | Not Applicable |
| | Additional Service | |

10.1 The *Employer* is: Airports Company South Africa SOC, Cape Town International Airport

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Address:
Cape Town International Airport
Private Bag X9002
Cape Town
7525

Tel No: 021 937 1200

Fax No: 021 936 2937

| | |
|---|---|
| 11.2(9) | The *services* are: **DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS** |
| 11.2(10) | The following matters will be included in the Risk Register<br>• Availability of As Built information<br>• Access to Site<br>• Statutory approvals and ACSA approvals<br>• Site Constraints and Constructability<br>• Notification of Claims<br>• Financial and Procurement |
| 11.2(11) | The Scope is in the document called Part 3: Scope of Work |
| 12.2 | The *law of the contract* is the law of the Republic of South Africa |
| 13.1 | The *language of this contract* is English |
| 13.3 | The *period for reply* is Two (2) Weeks |
| 13.6 | The *period for retention* is 10 years following Completion or earlier termination |
| **2** | **The Parties' main responsibilities** |
| 25.2 | The *Employer* provides access to the following persons, places and things |

| | **access to** | ***access date*** |
|---|---|---|
| **1** | All As-built Information & existing services | Upon award of the project(s) |
| **2** | Relevant Engineering, Operational and Maintenance Personnel of ACSA | Upon award of the project(s) |

| | |
|---|---|
| **3** | **Time** |
| 31.2 | The *starting date* is upon signing of contract by ACSA |
| 11.2(3) | The *completion date* for the whole of the *services* is **Six** (**6) Months after the start date**. |
| 11.2(6) | The *key date*s and the *condition*s to be met are: |

| | ***Condition* to be met** | ***key date*** |
|---|---|---|
| **1** | Project initiation and strategic brief | 1 Month after issuing of Purchase order |
| **2** | Concept design stage | 2 Month after the submission of project initiation |
| **3** | Detailed design stage | 3 Months Weeks after the approval of concept designs |
| **4** | Documentation and Procurement | Not Applicable |
| **5** | Contract Administration and Inspection | Not Applicable |

| | | |
|---|---|---|
| **6** | Handover | Not Applicable |
| **7** | Project Close-out | Not Applicable |

| | |
|---|---|
| 31.1 | The *Consultant* is to submit a first programme for acceptance within 2 weeks of the Contract Date. |
| 32.2 | The *Consultant* submits revised programmes at intervals of 4 weeks. |
| **4** | **Quality** |
| 40.2 | The quality policy statement and quality plan are provided within 2 weeks of the Contract Date. |
| 41.1 | The *defects date* is 52 weeks after Completion of the whole of the *service*s. |
| **5** | **Payment** |
| 50.1 | The *assessment interval* ends and starts at 12h00 on the 25th day of each successive month. |
| 51.1 | The period within which payments are made is 3 weeks, after the receipt of the tax invoice. |
| 51.2 | The *currency of this contract* is the South African Rand (ZAR). |
| 51.5 | The *interest rate* is.<br><br>The prime lending rate (calculated on a 365-day year) charged by Nedbank of South Africa, from time to time, as certified, in the event of any dispute, by any manager of such bank, where appointment shall not be necessary to prove. |
| **6** | **Compensation events** |
| | No data required for this section of the *conditions of contract*. |
| **7** | **Rights to material** |
| | No data required for this section of the *conditions of contract*. |
| **8** | **Indemnity, insurance and liability** |
| | For additional insurance provisions - Refer to Part C4.2 - **Insurance Clauses for Capex Projects** |

81.1 The amounts of insurance and the periods for which the *Consultant* maintains insurance are

| **Event** | **Cover** | **Period following Completion of the whole of the services or earlier termination** |
|---|---|---|
| failure by the *Consultant* to use the skill and care normally used by professionals providing services similar to the *service*s | The successful bidder - Consultant to submit Insurance Certificate of Professional Indemnity limit not less **than two times of the contract value** | Minimum 4 years |
| death of or bodily injury to a person (not an employee of the *Consultant*) or loss of or damage to property resulting from an action or failure to take action by the *Consultant* | Consultant to submit Insurance Certificate of Insurance for Public Liability Insurance limit **not less than R25 000 (twenty-five thousand rands)** | Minimum 4 years |
| death of or bodily injury to employees of the *Consultant* arising out of and in the course of their employment in connection with this contract | As prescribed by the Compensation for Occupational Injuries and Diseases Act 130 of 1993 | 3 years |

| | |
|---|---|
| | The Employer takes out insurance in excess to the insurance cover taken by the Consultant and additional insurance cover, and the Consultant becomes liable for the deductibles in the event of an insurance claim made under the insurance of the Employer.<br><br>In the event where the Consultant defaults in its insurance obligations, the Employer may take insurance on its own and then deduct the monthly premiums from the Consultant, and the Consultant further responsible for any deductibles in the event of an insurance claim. |
| **82** | **Limitation of liability** |
| 82.1 | The Consultant's total direct liability to the Employer for all matters arising under or in connection with this contract, other than excluded matters, is the total of the incurred losses and/or damages caused to the property applies in contract, delict and otherwise to the extent allowed under the law of the contract.<br><br>The excluded matters are obligations and amounts payable by the Consultant as stated in this contract for<br>• Delay damages,<br>• Consultant's share if Option C applies,<br>• An infringement by the Consultant of the rights of Others,<br>• Loss or damage to third party property,<br>• Death of or bodily injury to a person other than an employee of the Consultant, and<br>• Insurance obligations of the Consultant. |
| 82.2 | Subject to other provisions of this contract, the Consultant's liability to the Employer is limited to that proportion of Employer's losses for which the Consultant is responsible under this contract. |
| **9** | **Termination** |
| | Refer to Secondary Option Clause X11. |
| **10** | **Data for main Option clause** |
| | Refer to Z clause 1 |
| 21.3 | The *Consultant* prepares forecasts of the total of the *expenses* at intervals of no longer than 4 weeks. |
| **11** | **Data for Option W1** |
| W1.1 | The *Adjudicator* is the person selected by the Parties as and when a dispute arises in terms of the relevant Z Clause, from the Panel of Adjudicators provided under the Annexure C |
| W1.2(3) | The *adjudicator nominating body* is the current Chairman of the Johannesburg Advocates' Bar Council. |
| W1.4(2) | The *tribunal* is Arbitration |
| W1.4(5) | The arbitration procedure is as set out in The Rules for The Conduct of Arbitrations 2013 Edition, 7th Edition Rules of The Association Of Arbitrators (Southern Africa).<br><br>The place where arbitration is to be held is Cape Town, South Africa.<br><br>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.<br>The Arbitrator nominating body is the Chairman of the Johannesburg Bar Council. |
| **12** | **Data for Secondary Option clauses** |
| **X1** | **Price adjustment for inflation** |
| X1.1 | The *index* is Consumer Price Index (CPI) |
| | The *staff rates* are as per price schedule |
| **X2** | **Changes in the law** |
| X2.1 | The *law of the project* is the law of the Republic of South Africa subject to the jurisdiction of the Courts of South Africa. |
| **X3** | **Multiple currencies** |

| | |
|---|---|
| **X3.1** | The exchange rates are used to convert from the currency of the contract to other currencies. |
| **X7** | **Delay Damages** |
| | Delay damages for each section of the work are 2.5% per week to the maximum of 10% of Total of the Prices at completion date. |
| **X10** | **The *Employer's Agent*** |
| X10.1 | The *Employer's Agent* is<br><br>Name: Vuyolwethu Ncedana<br><br>Address:<br>Southern Office Block<br>Cape Town International Airport<br>Private Bag X9002<br>Cape Town<br>7525<br><br>The authority of the *Employer's Agent* is Project Manager. |
| **X11** | **Termination by Employer** |
| **X11.1** | The Employer may terminate the Consultant's obligation to Provide the services for a reason not stated in this contract by notifying the Consultant. |
| **X18** | **Limitation of liability** |
| X18.1 | Neither Party is liability 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 | The *Consultant's* liability to the *Employer* for Defects that are not found until after the *defects date* is limited to the Total damages suffered and/or costs incurred to the Employer's property. |
| X18.3 | The end of liability date is 3 years after Completion of the whole of the services. |

| | |
|---|---|
| **Z** | ***Additional conditions of contract*** |
| | The *additional conditions of contract* are |
| | **AMENDMENTS TO THE CORE CLAUSES** |
| **Z1** | **Interpretation of the law** |
| Z1.1 | **Add the following at the end of core clause 12.3:** Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties 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** | **Add the following at the end of core clause 12:** |
| Z2.1 | In this contract: |
| Z2.1.1 | references to any Party to the Contract include its successors or permitted assigns; |
| Z2.1.2 | references to the *Consultant* include the obligations of its personnel; |
| Z2.1.3 | the references to the provisions of any law shall include such provisions as amended, re-enacted or consolidated from time to time in so far as such amendment, re-enactment or consolidation applies or is capable of applying to any works under this Contract; |
| Z2.1.4 | references to this Contract and any deed, Contract or instrument are deemed to include references to this Contract or such other deed, agreement or instrument as amended, novated, supplemented, varied or replaced from time to time; |
| Z2.1.5 | references to a "person" include a natural person, company or any other artificial person or other corporate entity, a charity, trust, partnership, joint venture, syndicate, or any other association of persons; |
| Z2.1.6 | references to "month" shall be to a calendar month; |

Z2.1.7 headings are for convenience only and will not be taken into consideration in the interpretation of the Contract;

Z2.1.8 where any number of days is prescribed, those days shall be reckoned exclusively of the first and inclusively of the last day unless the last day falls on a day that is not a working day, in which event the last day shall be the next succeeding working day;

Z2.1.9 any provision in Contract that is or may become illegal, invalid or unenforceable in any jurisdiction shall be ineffective to the extent of such prohibition or unenforceability in such jurisdiction and shall be treated as severed from the balance of Contract in such jurisdiction, without invalidating the remaining provisions of Contract in such jurisdiction or affecting it in any other jurisdiction;

Z2.1.10 references to any amount shall mean that amount exclusive of VAT, unless the amount expressly includes VAT;

Z2.1.11 the rule of construction that if general words or terms are used in association with specific words or terms that are a species of a particular genus or class, the meaning of the general words or terms shall be restricted to that same class shall not apply, and whenever the word "including" is used followed by specific examples, such examples shall not be interpreted so as to limit the meaning of any word or term to the same genus or class as the examples given;

Z2.1.12 the rule of construction that the Contract shall be interpreted against or to the disadvantage of the party responsible for the drafting or preparation of Contract shall not apply;

Z2.1.13 words and abbreviations that have well known technical or trade meanings are used in the Contract in accordance with such recognized meanings;

Z2.1.14 references to a "*subsidiary*" or a "*holding company*" shall be references to a direct or indirect subsidiary or holding company as defined in the law of the jurisdiction of the place of incorporation of the company that has a subsidiary or holding company and "affiliate" is any company that is under common control with such subsidiary or holding company;

Z2.2 Time is of the essence in the performance of the parties' respective obligations.

**Z3 Early Warning: add the following at the end of core clause 16.2:**

The Contractor ensures that a subcontractor attends risk reduction meeting if its attendance would assist in deciding the actions to be taken.

**Z4 The *Consultant*'s obligations: Delete core clause 21 and replace with the following:**

Z4.1 The *Consultant* Provides the *Services* in accordance with the *Scope* and with due expedition and without delay.

Z4.2 The *Consultant's* obligation is to use the skill, care and diligence that is required of a professional providing similar services. The *Consultants* observes and/or exercise the degree of skill, care, diligence, prudence and foresight which would reasonably and ordinarily be exercised by a skilled and experienced *Consultant* in relation to his practices, methods, techniques, specifications and/or standards (whether in respect of design, engineering, construction, performance, safety, workmanship, equipment, components or otherwise) engaged in the same type of undertaking under the same or similar circumstances and conditions to the Services.

Z4.3 The *Consultant* represents that he is, and ensures that he is at all times fully experienced, properly qualified, registered, licensed, equipped, organized and financed to perform the Services in terms of this contract.

Z4.4 The *Consultant* warrants that he has satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information provided to him as at the Contract Date.

**Z5 Sub-consulting**

**Add the following as a new core clause 24.4:** "The *Consultant*, within five days of request by the *Employer*, provides proof to the *Employer* that the *Consultant's* payment obligations towards its sub-consultants have been discharged. Failure by the *Consultant* to provide such proof to the satisfaction of the *Employer* entitles the *Employer* to certify payment directly to any such sub-consultant and the *Consultant* has no recourse to recover such amounts from the *Employer*. Such direct payment does not create privity of contract between the *Employer* and such sub-consultant. The *Employer* may set-off such direct payment from the amounts due to the *Consultant*.

**Z6 Add the following as a new core clause 26: Procedure for acceptance of the Consultant's Design Documents**

Z6.1 If the Consultant assumes any design responsibility, then the *Consultant* submits the *Consultant*'s Design Documents to the *Employer* for acceptance at the times and in the manner and format stated in the Scope. For the purposes of this clause, the "***Consultant*'s Design Documents**" are the drawings, design details and specifications of work, Plant and Materials prepared by the *Consultant* for the works.

Z6.2 The *Employer* returns each *Consultant*'s Design Document to the *Consultant* marked either 'A' (accepted), 'B' (accepted with comments) or 'C' (rejected). If the *Employer* marks a *Consultant*'s Design Document 'B' or 'C', he states his reasons. A reason for not accepting a *Consultant*'s Design Document is that it does not comply with:

Z6.2.1 the Scope;

Z6.2.2 any previous *Consultant*'s Design Documents which the *Employer* has returned marked 'A', or the *Employer* has returned marked 'B' and the *Consultant* has amended to incorporate the *Employer*'s comments;

Z6.2.3 the applicable laws and regulations; or

Z6.2.4 any other provision of this contract.

Z6.3 The Employer responds to the Consultant in accordance with clause Z6.2 above as soon as practicable. The *Consultant's* Design Documents shall not proceed to the next stage of the design process without the necessary response from the *Employer*, which response shall not be unreasonable delayed or withheld.

Z6.4 Where a *Consultant*'s Design Document is returned marked 'A', the *Consultant* proceeds with the relevant work in accordance with the *Consultant*'s Design Document.

Z6.5 Where a *Consultant*'s Design Document is returned marked 'B', the *Consultant* amends the *Consultant's* Design Document to incorporate the *Employer's* comments and submits the *Consultant's* Design Document as so amended to the *Employer* for the *Employer's* acceptance. The *Employer* responds to the *Consultant's* amended Design Documents above as soon as practicable. The *Consultant's* shall not proceed with the relevant work in accordance with the amended *Consultant's* Design Documents until such amendments are accepted by the *Employer*, which acceptance shall not be unreasonable delayed or withheld.

Z6.6 Where a *Consultant*'s Design Document is returned marked 'C', the *Consultant*:

Z6.6.1 amends the *Consultant*'s Design Document to incorporate the *Employer*'s comments,

Z6.6.2 re-submits it to the *Employer* for acceptance; and

Z6.6.3 does not proceed with the relevant work until the *Employer* has returned it marked 'A' or 'B' and, where it is marked 'B', has complied with clause Z6.5.

Z6.7 If the *Consultant* disagrees with a comment of the *Employer* on a *Consultant*'s Design Document marked 'B' or 'C', he notifies the *Employer* within one week of receipt stating his reasons and that in his opinion compliance with the comment will give rise to a change in the Scope. The *Employer* replies within one week of receipt of the *Consultant*'s notice either confirming or withdrawing his comment. A confirmation or withdrawal by the *Employer* is not an acceptance of the *Consultant*'s opinion

Z6.8 If the *Consultant* does not notify the *Employer* within one week that he disagrees with a comment of the *Employer*, compliance with the comment does not give rise to a change in the Scope.

**Z7 Extending the defects date: add the following as a new core clause 42:**

Z7.1 If the *Employer* cannot use the work 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 work.

Z7.2 The *Employer* notifies the *Consultant* 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.

**Z8 Assessing the amount due:**

**Delete the first sentence of core clause 50.2 and replace with the following:**
Invoices submitted by the Consultant to the Employer include

- the details stated in the Scope to show how the amount due has been assessed, and
- the details required by the Employer for a valid tax invoice.

**Z9 Payment**

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Z9.1 **Delete the first sentence of core clause 51.1 and replace with the following:**
Each payment is made by the Employer within three weeks of receiving the Consultant's invoice showing the details which this contract requires or, if a different period is stated in the Contract Data, within the period stated.

Z9.2 **Add the following as a new core clause 51.6:**
If the *Consultant* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.4 is then calculated from the delayed date by when payment is to be made.

**Z10 Compensation events: core clause 60.1(1) is amended to read as follows:**

(1) The *Employer* gives an instruction to change the Scope, except
- a change to the Scope provided by the *Consultant* which is made either at his request or to comply with another part of the Services;
- a change to the Scope arising from a decision at a risk reduction meeting where such a change is required as a result of the *Consultant's* fault or as a consequence of a risk carried by the *Consultant*.

**Z11 Notification of a compensation event: the last sentence of core clause 61.3 is amended to read as follows:**

If the Consultant does not notify a compensation event within four weeks of the date on which the Consultant became aware of the event or ought to have become aware of the event, he is not entitled to a change in the Prices, the Completion Date or a Key Date and the Employer is absolved from all liability in connection with the event.

**Z12 Assessing compensation events: add the following at the end of core clause 63.4:**

The Consultant shall only be entitled to changes to the Prices, the Completion Date and/or the Key Date if the compensation event affects a critical path.

**Z13 Time periods for compensation events: add the following as a new clause 66.1:**

The time periods stipulated in this clause 6 may be amended by agreement between the Parties and the Project Manager if the Employer's internal procedures dictate that the time periods be so extended and such agreement shall not be unreasonably withheld by the Consultant.

## AMENDMENTS TO THE MAIN OPTION CLAUSES[1]

**Z14** The below *project stages* are used to price for the Consultant's Services where the Prices are based on the cost of construction.

Where the Services in stages 1 and 2 are time based, main Option E is used for these stages and either main Option A or C (as applicable) is used to price for the remaining stages.

The *project stages* are:

| ***project stage*** | | **Key deliverable at end of each stage as described in th** |
|---|---|---|
| **No** | **Description** | **Scope and accepted by the *Employer*** |
| 1 | Project initiation | Strategic brief |
| 2 | Concept | Concept report |
| 3 | Design development | Design development report |
| 4 | Production information | Completed production information |
| 5 | Manufacture, fabrication and construction | Construction works capable of being used by the *Employer* as intended. |
| 6 | Post completion | Completed project contracts |

[1] **The project stages are used where the Activity Schedule is used to Price the Consultant / Project Manager's services.**

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**Z15** **Using Option A when the Prices are based on the cost of construction**

**Delete clause 11.2(15) in Option A and replace with:**

11.2 (26) The Price for Services Provided to Date is the total of

- the Prices for each *project stage* which has been completed and
- a proportion of the Price for each *project stage* which is the proportion of *service*s completed in that *project stage*.

**Delete clause 11.2(18) and replace with:**

11.2 (27) The Prices are calculated for each of the *project stages* in terms of the following formula unless later changed in accordance with this contract:

Price = $(10 \times C^{-0,1}) \times f \times AP \times C / 100$

where

$(10 \times C^{-0,1})$ is the basic percentage fee

f is a *factor* by which the basic percentage fee is multiplied to reflect the nature and complexity of the *service*s

AP is the *apportionment factor* associated with a particular *project stage*

C is the total of the prices at award of all contracts concluded by the *Employer* with Others on the same project in millions to two decimal places of the *currency of this contract* to construct the works designed by the *Consultant* as part of the *service*s, excluding

- any taxes which the law requires the *Employer* to pay the Others and
- any amount provided for in the contracts with the Others for
  - the performance of work or services that are unforeseen and cannot be specified at the time the contract was concluded,
  - provision for price adjustment for inflation, or
  - other provisions of a budgetary nature.

Until all contracts within C have been awarded, estimated values of C are used to calculate the Prices. When all contracts have been awarded, the Prices are recalculated using the final value for C.

**Z16** **Using Option C when the Prices are based on the cost of construction**

The *project stages* are the Activity Schedule.

**Delete clause 11.2(18) and replace with:**

11.2 (27) The Prices are calculated for each of the *project stages* in terms of the following formula unless later changed in accordance with this contract:

Price = $(10 \times C^{-0,1}) \times f \times AP \times C / 100$

where

$(10 \times C^{-0,1})$ is the basic percentage fee

f is a *factor* by which the basic percentage fee is multiplied to reflect the nature and complexity of the *service*s

AP is the *apportionment factor* associated with a particular *project stage*

C is the total of the prices at award of all contracts concluded by the *Employer* with Others on the same project in millions to two decimal places of the *currency of this contract* to construct the works designed by the *Consultant* as part of the *service*s, excluding

- any taxes which the law requires the *Employer* to pay the Others and
- any amount provided for in the contracts with the Others for
  - the performance of work or services that are unforeseen and cannot be specified at the time the contract was concluded,
  - provision for price adjustment for inflation, or
  - other provisions of a budgetary nature.

Until all contracts within C have been awarded, estimated values of C are used to calculate the Prices. When all contracts have been awarded, the Prices are recalculated using the final value for C.

The total of the Prices using the final value of C is used when assessing the *Consultant*'s share in clause 54

**Z17** **Using Option A / C when the Prices are accepted after the completion of the concept stage of the project**

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

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

**Z18** **Add the following bullet after the first bullet in clause 90.4:**

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

## AMENDMENTS TO THE SECONDARY OPTION CLAUSES

**Z19** **Changes in the Law: Add the following as a new secondary option clause X2.2 (if option X2 is applicable to this Contract):**

A change in law is defined as:

- the adoption, enactment, promulgation, coming into effect, repeal, amendment, reinterpretation, change in application or other modification after the Contract Date of any law, excluding (i) the enactment of any bill inside the country, but only if such bill is enacted without any material changes being made to the contents of such bill from the form published in the Gazette (as defined in the Interpretation Act, 1957) as at the Contract Date, and (ii) any such modification in law relating to any taxes, charges, imposts, duties, levies or deductions that are assessed in relation to a person's income; or
- any permit being terminated, withdrawn, amended, modified or replaced, other than (i) in accordance with the terms upon which it was originally granted, (ii) as a result of the failure by the *Contractor* to comply with any condition set out therein, or (iii) as a result of any act or omission of the *Contractor*, any Subcontractor or any affiliate to the *Contractor*.

**Z20** **Delay Damages: add the following to as a new secondary option clause X7.3 (if option X7 is applicable in this contract)**

If the amount due for the *Contractor*'s payment of delay damages reaches the limits stated in this Contract Data for Option X7, the *Employer* may, at its sole discretion, terminate the *Contractor*'s obligation to Provide the Services.

**Z21** **Performance Bond**

Z21.1 **Amend the first sentence of secondary option clause X13.1 to read as follows:** The *Consultant* gives the *Employer* an unconditional, on-demand performance bond, provided by a bank or insurer which the *Employer* has accepted, for the amount stated in the Contract Data and in the form set out in Annexure B of this Contract Data.

Z21.2 **Add the following as new secondary option clause 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.

**Z22** **Limitation of liability: Insert the following new clause as Option X18.4:**

Z22.1 The *Employer's* liability to the *Consultant* for the *Consultant's* indirect or consequential loss is limited to R0.00.

Z22.2 Notwithstanding any other clause in this contract, any proceeds received from the security bonds and guarantees provided by the Consultant in terms of this Contract and any insurances or any proceeds which would have been received from any insurances but for the conduct of the *Consultant* shall be excluded from the calculation of the limitations of liability listed in the contract.

**ADDITIONAL Z CLAUSES**

**Z23** **Cession, delegation and assignment**

Z23.1 The *Consultant* shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*, which consent shall not be unreasonably withheld. This clause shall be binding on the liquidator/business rescue practitioner /trustee (whether provisional or not) of the *Consultant*.

Z23.2 The *Employer* may, on written notice to the *Consultant*, cede and delegate its rights and obligations under this contract to any person or entity.

**Z24** **Joint and several liability**

Z24.1 If the *Consultant* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons, these persons are deemed to be jointly and severally liable to the *Employer* for the performance of the Contract.

Z24.2 The *Consultant* shall, within 1 week of the Contract Date, notify the *Employer* of the key person who has the authority to bind the *Consultant* on their behalf.

Z24.3 The *Consultant* does not materially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without prior written consent of the *Employer*.

**Z25** **Ethics**

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Z25.1 The *Consultant* undertakes:

Z25.1.1 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;

Z25.1.2 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.

Z25.2 The *Consultant*'s breach of this clause constitutes grounds for terminating the *Consultant*'s obligation to Provide the Services or taking any other action as appropriate against the *Consultant* (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.

Z25.3 If the *Consultant* is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices, including but not limited to the making of offers (directly or indirectly), payments, gifts, gratuity, commission or benefits of any kind, which are in any way whatsoever in connection with the contract with the *Employer*, the *Employer* shall be entitled to terminate the contract in accordance with the procedures stated in core clause 92.2. the amount due on termination is A1.

**Z26 Confidentiality**

Z26.1 All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the *Consultant* and shall not be used or divulged or published to any person not being a party to this contract, without the prior written consent of the *Project Manager* or the *Employer*, which consent shall not be unreasonably withheld.

Z26.2 If the *Consultant* is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the *Project Manager*.

Z26.3 This undertaking shall not apply to –

Z26.3.1 Information disclosed to the employees of the *Consultant* for the purposes of the implementation of this agreement. The *Consultant* undertakes to procure that its employees are aware of the confidential nature of the information so disclosed and that they comply with the provisions of this clause;

Z26.3.2 Information which the *Consultant* is required by law to disclose, provided that the *Consultant* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Consultant* may disclose such information only to the extent required by law and shall use reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed;

Z26.3.3 Information which at the time of disclosure or thereafter, without default on the part of the *Consultant*, enters the public domain or to information which was already in the possession of the *Consultant* at the time of disclosure (evidenced by written records in existence at that time);

Z26.3.4 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*.

Z26.4 The *Consultant* ensures that all his Sub Consultants abide by the undertakings in this clause.

**Z27 *Employer*'s Step-in rights**

Z27.1 If the *Consultant* defaults by failing to comply with his obligations and fails to remedy such default within the period stated in 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 sub-Consultant or supplier of the *Consultant*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Consultant*.

Z27.2 The *Consultant* co-operates with the *Employer* and facilitates and permits the use of all required information, materials and other matter (including but not limited to documents and all other drawings, CAD materials, data, software, models, plans, designs, programs, diagrams, evaluations, materials, specifications, schedules, reports, calculations, manuals or other documents or recorded information (electronic or otherwise) which have been or are at any time prepared by or on behalf of the *Consultant* under the contract or otherwise for and/or in connection with the *works*) and generally does all things required by the *Project Manager* to achieve this end.

**Z28 Liens and Encumbrances**

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

**Z29** **Intellectual Property**

**Z29.1** 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.

**Z29.2** IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works.*

**Z29.3** The *Consultant* gives the *Employer* an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the *works* for the purposes of constructing, repairing, demolishing, operating and maintaining the works.

**Z29.4** The written approval of the *Consultant* is to be obtained before the *Consultant*'s IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any *Consultant*'s IP available to any third party the *Employer* shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the *Employer* would use to protect its IP.

**Z29.5** The *Consultant* shall indemnify and hold the *Employer* harmless against and from any claim alleging an infringement of IP rights (**"the claim"**), which arises out of or in relation to:

**Z29.5.1** the *Consultant's* design, manufacture, construction or execution of the Works;

**Z29.5.2** the use of the *Consultant's* Equipment, or

**Z29.5.3** the proper use of the Works.

**Z29.6** The *Employer* shall, at the request and cost of the *Consultant*, assist in contesting the claim and the *Consultant* may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.

**AMENDMENTS TO THE W OPTION CLAUSES**

**Z30** **Dispute resolution: The following amendments are made to Option W1:**

Z30.1 **Under clause W1.3, in the fourth row of the first column of the adjudication table, the following words are added after the words "any other matter":** "excluding disputes relating to termination of the contract".

Z30.2 **The following clauses are added at the end of clause W1.3:**

Z30.2.1 "The Adjudicator shall decide the dispute solely on the written submissions of the parties. No oral submissions shall be heard during adjudication."

Z30.2.2 "Disputes relating to or arising from termination of the Contract shall not be determined by an adjudicator. Any such dispute shall be referred directly to arbitration."

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## ANNEXURE C

**Appointment of the Adjudicator**

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

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

Panel of Adjudicators

| Name | Location | Contact details (phone & e mail) |
|---|---|---|
| Adv. Ghandi Badela | Gauteng | +27 11 282 3700 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 reyneke@duma.nokwe.co.za |
| Mr. Emeka Ogbugo (Quantity Surveyor) | Pretoria | +27 12 349 2027 emeka@gosiame.co.za |

**Appointment of the Arbitrator**

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

Panel of Arbitrators

| Name | Location | Contact details (phone & e mail) |
|---|---|---|
| Adv. Ghandi Badela | Gauteng | +27 11 282 3700 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 reyneke@duma.nokwe.co.za |
| Mr. Emeka Ogbugo (Quantity Surveyor) | Pretoria | +27 12 349 2027 emeka@gosiame.co.za |

# Part C1.2b Contract Data

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

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

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

| Clause | Statement |
|---|---|
| 10.1 | The *Consultant* is (Name):<br>Company VAT Number<br>Address:<br><br>Tel No.:<br>Fax No.:<br>Email: |
| 22.1 | The *Consultant's key person*s are:<br>1 Name:<br>**Job Title:**<br>Responsibilities:<br>Qualifications:<br>Experience:<br><br>2 Name:<br>**Job Title:**<br>Responsibilities:<br>Qualifications:<br>Experience:<br><br>3. Name<br>**Job Title:**<br>Responsibilities<br>Qualification<br>Experience<br><br>**Attach more if required** |

| | |
|---|---|
| 11.2(3) | The *completion date* for the whole of the *services* is as required by ACSA |
| 11.2(10) | The following matters (if any) will be included in the Risk Register<br>• Availability of As-Built Information<br>• Access to Site<br>• Progress vs Programme<br>• Cash Flow Management |
| 11.2(13) | The *staff rates* are as stated in the Pricing Data |
| 25.2 | The *Employer* provides access to the following persons, places, and things |

| | **access to** | ***access date*** |
|---|---|---|
| **1** | All As-built Information & existing services | Upon award of the project(s) |
| **2** | Relevant Engineering, Operational and Maintenance Personnel of ACSA | Upon award of the project(s) |

| | |
|---|---|
| **A** | **Priced contract with activity schedule** |
| 11.2(14) | The *activity schedule* is in the Pricing Data |
| 11.2(18) | The tendered total of the Prices is in the Form of Offer and Acceptance |

# Part C2: Pricing Data

## C2.1 Pricing Instructions

The appointment of the company, comprising the successful professional team, will be in accordance with the following built environment professional councils, amended in line with ACSA's specific requirements at an operational airport.

| | | |
|---|---|---|
| 1 | Mechanical Engineer | *Guideline Scope of Services and Recommended Guideline Tariff of Fees published by:*<br>Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) |
| 2 | Electronics/Mechatronics Engineer | *Guideline Scope of Services and Recommended Guideline Tariff of Fees published by:*<br>Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) |
| 3 | Electrical Engineer | *Guideline Scope of Services and Recommended Guideline Tariff of Fees published by:*<br>Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) |

The fee proposal shall be based on a percentage of the installation value, based on the recommended "Tariff of Fees" less the percentage discount being offered by the Tenderer. No admin fee shall be payable on sub-consultant remuneration, if applicable.

Tenderers must only price in accordance with the pricing schedule below, this will enable ACSA to compare priced offers. Failure to submit a priced offer using the prescribed schedule will make the bid liable for disqualification.

**Remuneration for Professional Services**

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

The pricing structure is as per the proposal submitted (Tender ref no. [Category]) by the *Consultants*.

# C2.2 Price Schedule

| | |
|---|---|
| Project Description / Name | **DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS.** |
| Estimated cost of consultation | R |
| Estimated cost for to **DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS** and update as built drawings. | R |
| Provision for Airside Permit and Induction cost | R 30 000.00 |
| **Total estimated Project Cost (Excluding Fees & VAT)** | R |
| Estimated Installation Duration | |
| Estimated project Duration (Concept & Viability, Design, Procurement, Installation, Commission and Handover) | R |

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Pricing structure per activity, as per the proposal submitted (Tender ref no.

**Price Schedule 2: Time and Cost Fees**

| **Basic Professional Fees**<br>**1.** Mechanical Engineer | Estimated construction Value<br>R…….<br>Offered fees Excl. VAT | | | |
|---|---|---|---|---|
| | Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) | | | |
| Stage of Services according to SACQSP | % Fee for each Stage | Amount (excl. VAT) | % Discount offered | Offered Fee (excluding VAT) |
| Stage 1 - Initiation | 5 | | | |
| Stage 2- Concept Report / Feasibility Report | 15 | | | |
| Stage 3- Design Development Report | 15 | | | |
| **Sub-total** | | | | **R** |
| Additional Services:<br>Prepare As Built HVAC Layouts drawings for Terminal 1 and Terminal 5 | | | | **R** |
| **TOTAL** | | | | **R** |

| **Basic Professional Fees**<br>**2.** Electronics/Mechatronics Engineer | Estimated construction Value R……<br>Offered fees Excl. VAT | | | |
|---|---|---|---|---|
| | Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) | | | |
| | % Fee for each Stage | Amount (excl. VAT) | % Discount offered | Offered Fee (excluding VAT) |
| Stage 1 - Initiation | 5 | | | |
| Stage 2- Concept Report / Feasibility Report | 15 | | | |
| Stage 3- Design Development Report | 15 | | | |
| **Sub-total** | | | | **R** |
| Additional Services:<br>Prepare Network Architecture Diagram for the BMS | | | | **R** |
| **TOTAL** | | | | **R** |

| **Basic Professional Fees**<br>**3.** Electrical Engineer | Estimated construction Value<br>R…….<br>Offered fees Excl. VAT | | | |
|---|---|---|---|---|
| | Engineering Profession Act (Act No. 46/2000) as per the Board Notice 138 of 2015, Government Gazette, 4 December 2015, or Engineering Council of South Africa (ECSA) (Engineering Profession Act of 2000 (Act No. 46 of 2000)) | | | |
| | % Fee for each Stage | Amount (excl. VAT) | % Discount offered | Offered Fee (excluding VAT) |
| Stage 1 - Initiation | 5 | | | |
| Stage 2- Concept Report / Feasibility Report | 15 | | | |
| Stage 3- Design Development Report | 15 | | | |
| **Sub-total** | | | | **R** |
| Additional Services:<br>Prepare Electrical Schematic drawing for all Distribution boards for Terminal 1 and Terminal 5 | | | | **R** |
| **TOTAL** | | | | **R** |

| PROVISION FOR ANY ADDITIONAL WORK (OUTSIDE THE NORMAL SCOPE OF WORK) HOURLY RATES | | |
|---|---|---|
| ******** SUBJECT TO PRIOR APPROVAL BY ACSA********* | | |
| **DESCRIPTION** | **ALL INCLUSIVE RATE** | |
| **Electrical Engineer** | **EXCL VAT** | **INCL VAT** |
| Principals | | |
| Salaried Professionals | | |
| Senior Technician | | |
| **Electronics Engineer** | **EXCL VAT** | **INCL VAT** |
| Principals | | |
| Salaried Professionals | | |
| Senior Technician | | |
| **Mechanical Engineer** | **EXCL VAT** | **INCL VAT** |
| Principals | | |
| Salaried Professionals | | |
| Senior Technician | | |

| | | | |
|---|---|---|---|
| **Tenderer** | | | |
| | | | |
| **Signature:** | | **Date:** | |

## DISBURSEMENT SCHEDULE

(a) Only project related costs listed below and presented to ACSA will be compensated by ACSA.

(b) Any disbursement costs related to travelling to and from the airport or accommodation for the purpose of the project(s) is deemed to be inclusive in the agreed fee structure, unless otherwise agreed in writing by both parties. Disbursement costs not mentioned below (including under note (e)) may be brought to the attention of the ACSA project representative for approval and agreement on the recoverable amount, prior to incurring such cost.

(c) All rates are exclusive of VAT.

(d) Cellular calls and Travelling during Construction will be recovered through the Contractors' Claim.

(e) Health and Safety Agent will be recovered through Disbursements.

(f) No mark-up on any disbursement cost will be paid.

(g) No payment for disbursement will be made for the following:
- Travelling (except for on-site travelling) and accommodation
- Typing of correspondence, payment certificates, variation orders, progress reports or financial reports
- Telephone calls
- Cellular calls
- Computer costs
- Telefaxes (outgoing or incoming)
- Email (sent or received)

Above expenses by the Tenderer are deemed to be inclusive in their professional fees.

# Part C3: Scope of work

# C3.1: Employer's Scope

# Description of the *services*

## 1. Executive overview

The scope of works entails a normal service and additional service professional services for the upgrade of Building Management System (BMS) hardware and software services. Details design report must achieve stage 1- 3 to establish the high-level system architecture for the upgrade of the BMS system. Configuration of hardware equipments such as server, controllers, sensor and actuators including I/O devices. Additional to that software component must entail configuration data base setup, network diagrams, graphics, trend reporting, device communication and integration including remote access, control, scheduling and alarms for the purpose of compiling a Bill of Quantities document and a specifications documentation to be issued out on tender.

## 2. Interpretation and terminology

The following abbreviations are used in this Scope:

| Abbreviation | Meaning given to the abbreviation |
|---|---|
| ECSA | Engineering Council of South Africa |
| CTIA | Cape Town International Airport |
| NKP | National Key Point |
| CAA | Civil Aviation Authority |
| SANS | South African National Standards |
| FIDPM | Framework for Infrastructure Delivery and Procurement Management |
| JIG | Joint Inspection Group |
| BMS | Building Management System |
| CTIA | Capetown International Airport |
| HVAC | Heat Ventilation and Air Conditioning |
| DDC | Direct Digital Control |
| APC | Application Specific Controllers |

## 3. Specification and Description of the Services

The professional service provider must carry out an assessment of the current Building Management System (BMS) and identify the BMS system inadequacies and provide as built detailed drawing, report, design, and Bill of quantities (BOQ) for purpose of this upgrade to bring the BMS system to optimal level of operation.

Additional service required for professional are as follows.

- Prepare As Built HVAC Layouts drawings for Terminal 1 and Terminal 5
- Prepare Network Architecture Diagram for the BMS

- Prepare Electrical Schematic drawing for all Distribution boards for Terminal 1 and Terminal 5

The services required for this project are as stipulated on the scope of the upgrade.

The broad scope of services and activities shall be in accordance with relevant sections of the Guideline for Services and processes for estimating fees for persons Registered in terms of the Act, 2000 (Act No. 46 of 2000), and as amended by the specific project requirements.

## 4. Background Information

Airports Company South Africa has Building Management System (BMS) to control and monitor HVAC system functionality for adequate cooling. The BMS hardware's, software and its Network Automation Engines devices (NAE's) and controls require replacement as they pass their life span and exhibiting poor performance. Thus, the poor performance may include non-compliance to safety and authority regulations including the laws and regulations of South Africa like the Occupational Health and Safety Act of 1993 and its amendments.

The system still employees' old windows version which is not supported by Microsoft for any updates and the Metasys software version 6 has been phased out with the Metasys version 10 latest software available in the markets which may include the auxiliary equipment such network engines 3 which have been replaced by NAE 55510-0 upgraded version.

## 5. The Scope of Services must be as per FIDPM framework.

### 5.1. Stage 1: Inception Report *(Project Initiation)*

- Convene a project start-up meeting of the project.
- Attend project initiation meetings and stakeholder engagement meetings.
- Inspect the site and advise on the necessary surveys, analyses, tests and site or other investigations where such information will be required for stage 2 including the availability and location of infrastructure and services.
- Determine the availability of data, drawings and plans related to the project provide/draft the as built drawings.
- Deliverables will include report on project, as built drawings, site and functional requirements. Schedule of required surveys, tests, analyses, site and other investigations, Schedule of consents and approvals.

### 5.2. Stage 2: Preliminary Design *(Concept Stage)*

- Prepare and finalise the project concept in accordance with the brief, including project scope, project scale plus preliminary programme and viability of the project.
- Conduct design meetings as required.
- Establish that the design is compliant with ACSA regulatory authorities' requirements and incorporate these into the design.
- Refine and assess the concept design to ensure conformance with all regulatory requirements and consents.
- Coordinate design interface with the necessary relevant individuals from ACSA CTIA and external stakeholders.
- Advise client on asset outages and duration of outages where applicable.
- Prepare traffic accommodation drawings for approval by the Airfield Manager.
- Prepare preliminary process designs, preliminary designs, and related documentation for approval by relevant authorities and client and suitable for costing. The preferred option shall incorporate best engineering practices while maintaining cost effectiveness.

### 5.3. Stage 3: Detailed Design

- Following from the Prelim Design Report, after consultation with the Employer, prepare Detailed Design of the agreed concept.
- The detailed design shall include all the requirements as contained in section 1 above on the scope of works and shall take into consideration all relevant standards.
- Employer to Review Design Report for conformity with general design intent and Employer's requirements.
- Obtain approval for the proposed plans and programs from relevant Stakeholders.
- Provide finalised operational impact mitigation documentation and drawings and contingency plans to deal with asset outage for approval and communication.
- Get the proposed plans approved by the City of Cape Town where necessary/applicable.
- Prepare detailed estimates of construction/installation cost.

### 5.4. Additional Service

- Prepare As Built HVAC Layouts drawings for Terminal 1 and Terminal 5
- Prepare Network Architecture Diagram for the BMS
- Prepare Electrical Schematic drawing for all Distribution boards for Terminal 1 and Terminal 5

## 6. Scope of Deliverables Summary

The scope is for professional service to design of Building Management System (BMS) hardware and software for the Heat Ventilation and Air Conditioning System (HVAC) for Cape Town Internation Airport (CTIA) following FIPDM (Framework for Infrastructure Procurement and Delivery Management) stages.

- Stage 1 Inception
- Stage 2 Concept & Viability
- Stage 3 Design and Development

It is the responsibility of the consultant to ensure that the reports cover the current state and performance of the system. The existing BMS makes use of Johnson Controls. The new BMS should be a standalone network system not linked to ACSA network domain. The design of the BMS shall be equipped with network operator workstations (client will advise number of station) and standalone DDC Controllers. The network architecture shall consist of two levels, a high-performance peer to peer network operating at up to 19 000 baud or above as well as DDC Controller specific local area networks.

Access to system data shall not be restricted by the hardware configuration of the building management system. The hardware configuration of the BMS network shall be totally transparent to the user when accessing data or developing control programs.

The building management system (BMS) shall integrate multiple building functions including equipment supervision and control, alarm management, energy management and historical data collection.

The building management system shall consist of the following:

- Stand-alone DDC Controllers.
- Stand-alone Application Specific Controllers (ASCs).
- Portable operator's terminal(s)- software chip to be made available or preferable a web browser access.
- Personal computer operator workstation(s)- client will advise number of stations.

The upgraded system must include the following.

- Design new architect network for the new Building Management System (BMS) covering HVAC system and integration of monitoring lifts and escalators.
- The system shall be modular in nature and shall permit expansion of both capacity and functionality through the addition of sensors, actuators, DDC Controllers, Application Specific Controllers, and operator devices.
- System architectural design shall eliminate dependence upon any single device for alarm reporting and control execution. Each DDC Controller shall operate independently by performing its own specified control, alarm management, operator I/O and data collection. The failure of any single component or network connection shall not interrupt the execution of control strategies at other operational devices.
- New server hardware and operating station with latest windows operating system
- The hardware must have multiple redundant installations which will be connected to web clients through a common pair of load balanced web navigation servers.
- All license required for the system must be provided such Windows Operating license and antivirus and any additional requirements.
- If additional license for monitoring and remote operation with provision for data archiving utilizing the MS SQL server for messaging and for future analysis must be stated.
- The newly designed system must be able to integrate to the i/o modules sensors and communication network configuration and for future integration or be compatible with different OEM's equipment with Open-Source connection and to avoid reconfiguration of the system. This must support bidirectional data exchange and be exclusive to all the data types, controls, and status communication.
- DDC Controllers shall be able to access any data from, or send control commands and alarm reports directly to, any other DDC Controller or combination of controllers on the network without dependence upon a central processing device. DDC Controllers shall also be able to send alarm reports to multiple operator workstations without dependence upon a central processing device.
- Retrieve data, alarms, and enable control of devices/ machinery from remote site. This function will be preselected for operator level.
- Trends and alarms display should be easily retrieved in tubular format and published and extracted to excel format or PDF (portable data file)
- Management and quality assurance to monitor each equipment performance downtime.
- All communication protocols for HVAC system such as Fieldbus – N2 open protocol, MSTP protocol, IP interface, BACnet and Remote field bus to be accommodated.
- The final detailed design stage 1- 3 shall be carried out by the specialist controls company. This will include Network and communication configuration, Software and licensing, Servers and

Controllers and graphics are required for each plantroom and AHU's and all floors,

- Stage 3 report must cover both factory and on-site testing for critical functionality of each component on the system.

## 7. Design Specification/Standards

- **System Architecture:**

  - Utilize a hierarchical architecture with field devices, controllers, and supervisory systems.
  - Ensure redundancy in critical components to enhance reliability.

- **Communication Protocols**:

  - Implement standard communication protocols (e.g., Fieldbus – N2 open protocol, MSTP protocol or IP interface BACnet, TCP/IP, Remote field bus) for device interoperability.
  - Ensure seamless communication between controllers, field devices, sensors, and HVAC system.

- **User Interface Design**:

  - Create intuitive graphical user interfaces (GUIs) for operators to monitor and control HVAC system.
  - Include real-time data visualization, alerts, and control options.

- **Data Management**:

  - Establish a database for storing historical data, performance metrics, and logs.
  - Implement data backup and recovery procedures to prevent data loss.

- **Security Standards**:

  - Apply cybersecurity measures to protect the Building Management System (BMS) from unauthorized access.
  - Regularly update software and firmware to address vulnerabilities.

- **Integration with Other Systems**:

  - Ensure compatibility with lift and escalator system this my include fire system.
  - Facilitate data exchange and coordination between systems for improved operations.

- **Performance Monitoring**:

  - Set up metrics and KPIs to monitor system performance, including processing times and error rates.
  - Utilize predictive maintenance strategies to preemptively address potential issues.

- **Compliance with Regulations**:

  - Adhere to relevant aviation regulations and standards (e.g., SANS 10400, SANS 10400 XA) in the design and operation of the HVAC system.

- **Scalability and Flexibility**:

  - Design the system to accommodate future expansions and upgrades.
  - Ensure modular components that can be replaced or upgraded without significant downtime.

## 8. Drawing requirements

All drawings shall bear accepted contract references using a project title block which is accepted by the Employer. Detailed revision blocks and drawing numbers are suffixed accordingly.

All drawings, particularly layout drawings, submitted for acceptance shall be to a scale 1.100 acceptable to the Employer. All drawings are to be made to scale and fully detailed and dimensioned. All dimensions marked on the drawings are to be considered correct, although measurements by scale may differ therefrom. The material from which each part is to be made shall be indicated.

The drawings include tolerances for manufacture and installation. The tolerances are suitable and of sufficient accuracy to provide safe and trouble-free construction/installation and operation over the life of the component.

All copies of drawings submitted to the Employer are to be provided in the form of 4 prints on white paper with black lines. The drawing size is A0 unless the use of another size is unavoidable. All native electronic format documents are also provided.

All drawings shall be dimensioned in metric units unless the use of another unit is required and/or recommended, e.g., imperial sizes for flange holes, studs, etc. Where applicable, drawings shall show a graphic scale key plan and north arrow. Dates on drawings shall be reflected in the following format: dd/mm/ccyy. Revisions shall be designated R0, R1, R2, R3, etc., commencing with the first issue. All revisions shall be clearly described in the revision column bearing the revision number.

All drawings shall additionally comply with the latest revision of the ACSA standards where applicable.

## 9. List of Drawings

Where available drawings will be issued by the *Employer*

| | Drawing number | Revision | Title |
|---|---|---|---|
| 1 | | | |
| 2 | | | |

### Design Software and Programmes/Methodologies to be utilised.

AutoCAD for client to preview design on AutoCAD viewer.

## 10. Constraints on how the Consultant Provides the Services.

### Management meetings

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

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as follows:

| Title and purpose | Approximate time & interval | Location | Attendance by: |
|---|---|---|---|
| Risk registers and compensation events | Every two weeks | To be confirmed | *Employer's Agent, Consultant* |
| Overall contract progress and feedback | Monthly | To be confirmed | *Employer's Agent, Consultant* |
| | | | |

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

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

### *Consultant's key persons*

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

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

## 11. Work Plan

### *Objectives*

The project shall be done firstly in accordance with the Employer's objective as per his appointed NEC Scope of Works Briefing with detail tasks and deliverables for each of the project stages, i.e., Scoping and Brief Stage, Preliminary Design Stage, Detail Design and Bid Stage, Working Drawing Stage and Installation Stage.

### *ISO Quality Management System*

All projects shall be managed in accordance with strict ISO 9001 quality system ensuring quality in design, administration, reports and site administration. Consultants must be accredited with ISO9001 compliance, and each project shall be administrated with respect to quality and technical compliance, in accordance with these strict international Quality Procedures.

### *Programme and monthly feedback.*

A detailed programme for each project needs to be submitted within 14 days of appointment and updated regularly/monthly.

### *Consultation and Client Feedback*

Detailed consultation with the designated ACSA representative and on-going feedback and reporting during feasibility preliminary design, detailed design and construction stages will be essential in delivering optimal and acceptable solutions which are in line with ACSA specifications and budget allocations. A monthly progress and cost report shall be done from detail design stage onwards till construction ends.

### *Understanding the Works*

The Employer is not responsible for the failure of the Consultant to understand the precise nature of his undertaking under this contract or for any erroneous interpretation concerning the conditions affecting his performance, it being recognized that the Employer provided the Consultant sufficient opportunity to ask the Employer for clarification of the terms and conditions of this contract prior to submission of his tender to provide the services.

### *Compliance with Laws*

The Consultant keeps himself fully informed of and complies with all laws which apply to the Works and/or Services and/or to Providing the Works and/or Services (including laws which apply to persons employed to provide the Services and/or Works). "Laws" includes all national and provincial legislation, statutes ordinances and other laws and regulations and by-laws, orders and decrees of government or other legally constituted public authority and the common law.

### *Compliance with Codes & Standards*

The Services comply with the codes and standards stated in the Scope. To the extent not stated, the Services comply with internationally recognised codes and standards which are accepted by the Employer.

In case of conflict between national, international codes, standards or guidelines and/or the requirements specified in this Scope, and unless otherwise instructed by the Employer, the more onerous one takes precedence; provided always that the Services comply as a minimum and in any event, with applicable law and mandatory South African national codes, standards and guidelines.

### Health and safety

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

The *Consultant* shall comply with the Health and Safety requirements contained in section C4.4.

Health and Safety Agent shall be appointed for the construction phase. The Health and Safety Agent will audit the construction and check whether the Contractor is complying with the law, the specification as set out by the Employer as well as the Health and Safety specification as set out in the Contract document.

The Health and Safety Agent will submit a monthly report to the *Employer*'s Safety Department and give a report back at the Monthly Site Meetings.

## 12. Procurement

**BBBEE and Preferencing Scheme**

As your appointment is made on the basis of Black Economic Empowerment within your company, your BBBEE rating must be maintained, or improved, for the duration of the appointment.

## 13. Working on the Employer's property

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

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

Please also refer to C4.3: **SPECIAL REQUIREMENTS AT AN OPERATIONAL AIRPORT**.

**People restrictions, hours of work, conduct and records.**

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

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

## 14. Cooperating with and obtaining acceptance of Others

Whenever work being done by Others on the project is dependent on or adjacent or related to the Services, the interface and sequence of such works and the Services should be such that the least interference possible will result to the Consultant and to Others and such sequence is determined by the Employer. Cooperation is required between the *Consultant* and Others to ensure the completion of the Services and other project works within the programme for the project as a whole.

As may be required from time to time or as per statutory requirements, the *Consultant* will liaise with and obtain acceptance from statutory authorities and avail themselves for any inspections that would be required.

At the earliest possible date, detailed programmes prepared for all other project works having interfaces with the Services are discussed by the Employer with the Consultant in order that the phasing, duration, use of working areas, attendance work etc. can be drawn into overall programmes for the project works.

## 15. Things provided by the Employer.

The *Employer* will issue to the *Consultant* available information that will assist in the carrying out of the services. This information may include Base plans to indicate existing services.

The providing of this information does not relieve the *Consultant* of their professional responsibility to verify information that will be used as a basis for their designs.

# Part C4 Site Information

## C4.1 Site Information

## Description of the Site and its Surroundings General description

The site is the Cape Town International Airport and is situated on Landside, Terminal Buildings and Airside part of the airside. The site is situated in an active part of the airport where normal operations will be continuing during the execution of this project.

Aerial View of the Airport Precinct- SOB Airside Offices – Google images

**Some of the** (not visible on the picture but located on various parking bays)**, on the Site.**

**Subsoil Information**

N/A.

**Hidden Services**

The equipment/components to be replaced is not stand alone but part of an operational system therefore, there could be system restraints which might need minor modification prior to the main replacement. These can mostly be encountered during the replacement of downstream field devices and communication protocol cables, air eliminators, etc and shall be identified and outlined during the assessment of the system.

### Part C4.2: Insurance Schedule

***Summary of Terms and other Matters Applicable to Employer*** **Provided Insurance Part 1:**

Notes to Schedule:

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

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

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

The successful bidder must source the following insurance cover, which is the deductible in the ACSA insurance cover:

- Aviation liability insurance cover for an indemnity limit not less than R100 000 (one hundred thousand rands).
- Submit proof of insurance to ACSA before the work starts, and annually for the duration of the project.

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

The successful bidder must source the following insurance cover, which is the deductible in the ACSA insurance cover:

- Aviation liability insurance cover for an indemnity limit not less than R300 000 (three hundred thousand rands).
- Submit proof of insurance to ACSA before the work starts, and annually for the duration of the project.

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

1.1 **Sub-Contractors.**

The Contractor shall:

a) ensure that all potential and appointed Sub-contractors are aware of the whole contents of these Insurance Clauses, and

b) enforce the compliance by subcontract agreement between the Contractor and Sub-Contractor and where applicable that the Subcontractor effect similar insurance relating to the insurances required to be effected by the Contractor under Clause 2 (Contractor effected insurances).

**APPENDIX A**

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

**Send to: Airports Company South Africa**

*****.....
.....
.....
.....
.....
…….....

**E-Mail The Following People:**

Nokulunga.Masiza@airports.co.za

Buhle.Mnguni@airports.co.za

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

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

Date of loss: _____

Reported to site agent by: _____ Date: _____

Reported to Insurance Broker by: _____ Date: _____

How did the loss occur (cause)? _____

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Details and nature of loss or damage to Contract Works _____

Details of other property damaged _____

_____

Names and address of witnesses _____

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

Person whom assessor should contact _____

Telephone/Mobile Numbers Of Contact Person_____

Email Address of Contact Person_____

# Part C4.3 – ACSA SPECIAL REQUIREMENTS AT AN OPERATIONAL AIRPORT

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

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

## 1. Airports Manager

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

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

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

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

## 2. Airport Security and Safety

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

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

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

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

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

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

## 3. Responsibilities of Consulting Engineers/Contractor

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

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

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

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

## 4. Accident/Penalties

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

Distinction will be made between the following types of accidents:

(i) Accidents of minor nature not having effect on the operational efficiency of the involved vehicles, building or airport property.

(ii) Accidents causing property damage affecting the operational efficiency of vehicles or infrastructure or causing injury to persons traveling in vehicles.

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

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

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

The Airport Manager reserves the right to:

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

## 5. Identification and Warning Lights

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

## 6. Additional Security Measures

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

- Smoking and the making of fires are prohibited in certain areas of the airport. Open fires may only be made in designated areas after written permission has been obtained from the Airport Manager, who will also supervise such fires. No smoking is allowed in the apron areas.

- No accommodation of personnel will be allowed in the security area of the airport.

- No drawings, sketches, diagrams, information, etc. pertaining to the works, airport, accidents, etc. may be made, reproduced or registered, except when it is necessary for the execution of the contract. No information regarding accidents, airport activities, reports, etc. shall be given to anybody and no press release shall be made, or interview may be given to anybody without the written permission from the Airport Manager.

- Any interference with airport personnel, equipment or aircraft will be considered as an infringement of this clause. The Contractor will be held responsible for any damage, direct or indirect, to any airport equipment, aircraft, etc. caused by his own personnel or those of his subcontractors or suppliers whether on duty or not. The Contractor shall make good all costs necessary to remedy the situation including re-calibration of equipment where necessary. The Contractor shall note that especially navigation equipment is extremely sensitive and may be disturbed by sitting or leaning on it.

- No aircraft may be touched or moved by any member of the construction team. In case of an aircraft accident, no assistance whatsoever may be given by the Contractor unless specifically requested and all staff must stay away from any part of an accident scene for a distance of at least 300m.

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

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

## 7. Compliance with Instructions

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

## 8. Delays Caused by Airport Management

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

## 9. General Requirements for Execution of the Work

At the end of each work period, all plant, vehicles, material and obstructions must be removed to a demarcated safe area. The cost of removal of plant and materials and cleaning operations shall be deemed to be included in the relevant work items or in the general items.

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

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

## 10. Times for the Execution of the Works

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

- The Contractor shall supply sufficient lighting facilities to enable him and his subcontractors to perform the work according to the requirements of the specification.

- At the end of the night's work all lights, power plants, etc. must be removed to a safe area indicated by the Engineer and the Airport Manager. Remuneration for the acquisition, transport, erection and maintenance of lighting and power plants shall be included in the items provided and shall be all-inclusive.

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

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

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

## 12. Dust and Pollution Control

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

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

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

## 13. Storing of Vehicles, Plant and Materials

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

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

## 14. Fires

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

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

The Contractor shall indemnify the Employer against claims that may arise from fires due to negligence

by the Contractor or his operations. If it is required by the Employer to extinguish any fires caused by the Contractor, the cost thereof will be for the Contractor.

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

## 15. Environmental

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

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

# C4.4 – ACSA OCCUPATIONAL HEALTH & SAFETY SPECIFICATION FOR ACSA

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36. Edge Protection and Penetration
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| **Client** | Airports Company South Africa SOC Ltd – Cape Town International Airport |
| **Project Brief** | Design and develop stage 1-3 design for Building Management system (BMS) for Cape Town International Airport for period of six (6) months |
| **Project** | Design and develop stage 1-3 design for Building Management system (BMS) for Cape Town International Airport for period of six (6) months. |
| **Location** | Central Terminal Building (CTB), Terminal 1-2, Terminal 5 and SOB |

## INTRODUCTION

In terms of the Construction Regulation 5(1) b the client, is required to compile a Health & Safety specification for any intended project and provide such specification to any prospective contractor and designers. The contractor, on appointment shall submit a Health & Safety plan which shall address the requirements of this specification.

This specification objective is to ensure that the contractor(s) entering into a contract with ACSA achieve an acceptable level of OH&S performance. This document forms an integral part of Project Information and the contract. Principle and other contractors should make it part of any contract that they may have with their contractors and /or suppliers.

Compliance with this document does not absolve the client from complying with minimum legal requirements and the client remains responsible for the health & safety of his employees and those of his mandatories. ACSA reserves the right to audit, monitor and where necessary regulate the site work activities of any principal contractor or appointed subcontractor as per Construction Regulation 5(1) (o) and section 5 of this document.

## 1. SCOPE AND DESCRIPTION OF PROJECT

**Project Description:** DESIGN AND DEVELOP STAGE 1-3 DESIGN FOR BUILDING MANAGEMENT SYSTEM (BMS) FOR CAPE TOWN INTERNATIONAL AIRPORT FOR PERIOD OF SIX (6) MONTHS.

| | |
|---|---|
| **Boundaries** | Works will be limited to CTB, Terminal 1-2, Terminal 5 and SOB |
| **Existing Services** | - Building Management System – HVAC |
| **Roads and Traffic Systems** | None |
| **Existing Structures** | - HVAC equipment and field devices |

## 2. DEFINITIONS

The definitions as listed in the OHS Act and Construction Regulations 84 of 7 February 2014 shall apply. Therefore, all references to the old Construction Regulations will change to the new Construction/installations Regulations.

**Client:** means any person for whom construction work is being performed.
**Principal Contractor:** means an employer appointed by the client to perform construction work.
**Contractor:** means an employer who performs 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.

**Competent person:** means a person who,

a) 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
b) is familiar with the Act and with the applicable regulations made under the Act.

**Designer:** means
(a) competent person who

i.) prepares a design.
ii.) checks and approves a design; or
iii.) arranges for any person at work under his or her control to prepare a design.
iv.) including an employee of that person where he/she is the employer or
v.) designs temporary work, including its components,

(b) an architect or engineer contributing to or having overall responsibility for a design.

(c) a building services engineer designing details for fixed plant.

(d) a surveyor specifying articles or drawing up specifications.

(e) A Contractor carrying out design work as part of a design and building project; or

(f) an interior designer, shopfitter, or landscape architect.

**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 guardrails, screens, barricades, anchorages or similar equipment.
**Fall arrest equipment** means equipment used to arrest a person in a fall, including personal equipment.
such as body harness, lanyards, deceleration devices, lifelines, or similar equipment.

**Hazard:** means a source of or exposure to danger
**Hazard identification:** means the identification and documenting of existing or expected hazards to the
health and safety of persons, which are normally associated with the type of construction work being executed or to be executed.

**Risk assessment** means the process contemplated in paragraph 10 of the specifications.

**Excavation work:** means the making of any man-made cavity, trench, pit, or depression formed by cutting, digging, or scooping.

**Ergonomics:** means the application of scientific information concerning humans to the design of objects, systems, and the environment for human use in order to optimise human well-being and overall system performance.

## 3. NOTIFICATION OF CONSTRUCTION

*(Construction Regulation 4)*

**The Principal Contractor who intends to carry out any construction work must** at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

(a) include excavation work.
(b) include working at a height where there is risk of falling.
(c) include the demolition of a structure; or
(d) Include the use of explosives to perform construction work.

## 4. DUTIES OF THE PRINCIPAL CONTRACTOR AND CONTRACTOR

*(Construction Regulation 7)*

**The Principal Contractor must:**

(a) 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. The 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.

(b) Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and this specification, which must be made available on request to an inspector, the client, the client's agent, or Contractor; and

(c) On appointing any other Contractor, in order to ensure compliance with the provisions of the Act—

i.) 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.

ii.) Ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process.

iii.) Ensure that no contractor is appointed to perform construction work unless the Principal Contractor is reasonably satisfied that the contractor that he/she intends to appoint, has the necessary competencies and resources to perform the construction work safely.

iv.) 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.

v.) Appoint each contractor in writing for the part of the project on the construction site.

vi.) Take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site.

vii.) Ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the Contractor and Principal Contractor, but at least once every 30 days.

viii.) 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, or which poses a threat to the health and safety of persons.

ix.) 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; and

x.) Discuss and negotiate with the contractor the contents of the health and safety plan and must thereafter finally approve that plan for implementation.

(d) Ensure that a copy of his or her health and safety plan, as well as the contractor's health and safety plan is available on request to an employee, an Inspector, a Contractor, the Client, or the Client's Agent.

(e) Hand over a consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation include a record of all drawings, designs, materials used and other similar information concerning the completed structure.

(f) 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; and

(g) 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.

**The 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 this specification.

**No contractor may allow** or permit any employee or visitor to enter the site, unless that employee or visitor has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry and must ensure all have the necessary personal protective equipment.

**The Contractor must prior to performing any construction work:**

(a) 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. The aforementioned 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.

(b) Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and this specification, and which must be made available on request to an Inspector, the Client, the Client's Agent or the Principal Contractor.

(c) Before appointing another contractor to perform construction work, be reasonably satisfied that the contractor that he/she intends to appoint has the necessary competencies and resources to perform the construction work safely.

(d) Co-operate with the Principal Contractor as far as is necessary ensuring all comply with the provisions of the Act; and

(e) As far as is reasonably practicable, promptly provide the 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 the contractor appoints another contractor** to perform construction work, the duties determined in **section 5** of this document applies to the contractor as if he/she were the Principal Contractor.

**A Contractor must** at all times keep 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.

## 5. MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

*(Construction Regulation 8)*

**The 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.

**The 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.

**No Construction Manager appointed under paragraph 6 above** may manage any construction work on or in any construction site other than the site in respect of which he/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 or part-time 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/she is reasonably satisfied that the construction health and safety officer that he/she intends to appoint has necessary competencies and resources to assist the Principal 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 contemplated in **paragraph 6** above, and every such employee has, to the extent clearly defined by the Principal Contractor in the letter of appointment, the same duties as the Construction Supervisor: Provided that the designation of any such employee does not relieve the Construction Supervisor of any personal accountability for failing in his or her supervisory duties in terms of this section in the specification..
**No Construction Supervisor appointed under paragraph 6 above** may supervise any construction work on or in any construction site other than the site in respect of which he/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.

## 6. REGISTRATION WITH THE WORKMEN'S COMPENSATION OR LICENSED INSURER

The Principal Contractor(s) must ensure that ACSA is provided with a valid letter of good standing, including a registration number with the Compensation for Occupational Injury and Diseases Fund or an alternative scheme approved in writing by the Commissioner to the COID Fund, at least 10 days prior commencement of construction work. It must remain the Principal Contractor's responsibility to furnish ACSA with a valid letter of good standing or keep a copy available for perusal by a Client, Client Representatives or any other person authorised thereto.

## 7. MANDATORY AGREEMENT

A duly signed mandatory form also referred to as 'OHS Act section 37.2' must be obtained from ACSA Safety Department. It must be signed and returned to ACSA by the Principal Contractor at least 10 days prior to commencement of construction work. The Principal Contractor must ensure that all its contractors have completed a similar document, and a proof of such signed documents is submitted to ACSA for reference purposes.

## 8. ASSIGNED PERSON IN TERMS OF OCCUPATIONAL HEALTH & SAFETY ACT OF 1993 & APPLICABLE REGULATIONS

A written letter of appointment must be forwarded to ACSA duly signed by responsible persons at least 3 days prior commencement of construction work for the following duties: **(Further appointments could become necessary as the project progresses and as per the requirements of OHS Act 85/1993)**

(a) Person assigned duties in terms of the 16.2 appointees of the Act.
(b) Construction Manager CR8(1)
(c) Assistant Construction Manager CR8(2) - *where applicable*
(d) Full-time or part-time Construction Safety Officer CR8(5)
(e) Construction Supervisor CR8(7))
(f) Assistant Construction Supervisor CR8(8) - *where applicable*
(g) Risk Assessor CR9(1)
(h) Fall Protection Developer/Planner CR10(1) - *where applicable.*
(i) Temporary Works Designer CR11(1) - *where applicable*
(j) Temporary Works Supervisor CR11(2) - *where applicable*
(k) Excavation Supervisor CR13(1)a) - *where applicable*
(l) Demolition Work Supervisor and Controller CR14(1) - *where applicable*
(m) Scaffolding Supervisor CR16(1) - *where applicable*
(n) Scaffolding Team leader CR16(1) - *where applicable*
(o) Scaffolding Inspector CR16(1) - *where applicable*
(p) Scaffolding Erector CR16(1) - *where applicable*
(q) Suspended Platforms Supervisor CR17(1) - *where applicable*
(r) Rope Access Supervisor CR18(1)a) - *where applicable*
(s) Rope Access Fall Protection Plan Developed (R18(2)b) - *where applicable.*
(t) Material Hoist Inspector CR19(8)a) - *where applicable*
(u) Bulk Mixing Plant Supervisor CR20(1) - *where applicable*
(v) Explosive Actuated Fastening Devise Operator CR21(2)b) - *where applicable*

(w) Explosive Actuated Fastening Device Controller CR21(2)g(i) - *where applicable*
(x) Construction Vehicles and Mobile Plant Operator CR23(1)d(i) - *where applicable*
(y) Temporary Electrical Installations Controller CR24(c) - *where applicable*
(z) Portable Electrical Equipment Supervisor CR24(d) - *where applicable*
(aa) Fire Equipment Inspector CR29(h) - *where applicable*
(bb) First Aider GSR3(4) -- *where applicable*
(cc) Stacking Supervisor (CR28(a)) (GSR2(a)
(dd) Competent Person in Confined Space Entry GSR5(1) - *where applicable*
(ee) Gas Cutting/Welding Supervisor (GSR9(a) - *where applicable*
(ff) Ladder Supervisor and Inspector (GSR13(a) - *where applicable*
(gg) Lifting Machine Inspector (DMR18(7) - *where applicable.*
(hh) Lifting Tackle Inspector (DMR18(10)e) - *where applicable.*
*(ii)* Lifting Machine Supervisor (DMR18(11) - *where applicable*
(jj) Supervisor of Machinery (GMR1) - *where applicable*
(kk) Safety Representatives (OHS Act Sec.17 - *where applicable*
(ll) Hazardous Chemical Substances Controller/Co-ordinator HCSR10 - *where applicable*
(mm) Incident Investigator (GAR9(2)
(nn) Blasting Supervisor (Supervision of Explosives Workplace ER12) - *where applicable*

## 9. HEALTH AND SAFETY DOCUMENTATION

The Principal Contractor must provide and demonstrate to ACSA a suitable, sufficiently documented and coherent site-specific health and safety plan, based on ACSA's documented health and safety specifications. The health and safety plan must include but not limited to the following during tendering process, before commencement of construction work and during construction:

**Principal Contractor's Health & Safety Policy**
The Principal Contractor must provide a health & safety policy signed by the Chief Executive Officer (CEO) which outlines Principal Contractor's commitment towards health and safety.

**Health and Safety Organogram**
The Principal Contractor must provide a health & safety organogram which outlines related appointments in terms of the OHS Act and applicable Regulations. Contact numbers should also be provided for easy reference.

## 10. RISK ASSESSMENT

*(Construction Regulation 9)*

**A Contractor must**, before the commencement of any construction work and during such 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—

(a) the identification of the risks and hazards to which persons may be exposed to.
(b) an analysis and evaluation of the risks and hazards identified based on a documented method.
(c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified.
(d) a monitoring plan; and
(e) a review plans.

**A Contractor must** ensure that:

(f) as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.
(g) that all employees under his or her 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.

(h) 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 that may be determined in the risk assessment monitoring and review plan of the relevant site.
(i) consult with the health and safety committee or, if no health and safety committee exist, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site
(j) copies of the risk assessments of the relevant site are available on site for inspection by an inspector, the client, the client's agent, any Principal Contractor, any employee, a representative trade union, a health and safety representative or any member of the health and safety committee.
(k) review the relevant risk assessment—
  i. where changes are affected to the design and or construction that result in a change to the risk profile; or
  ii. when an incident has occurred.

## 11. FALL PROTECTION PLAN

*(Construction Regulation 10)*

**A Contractor must**

(a) designate a competent person to be responsible for the preparation of a fall protection plan.
(b) ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
(c) take steps to ensure continued adherence to the fall protection plan.

**The Fall Protection Plan must include.**

(a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location.
(b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof.
(c) a programme for the training of employees working from a fall risk position and the records thereof.
(d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
(e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

**A Contractor must ensure that:**

(a) **The Construction Manager** appointed under **Construction Regulation 8(1)** is in possession of the most recently updated version of the fall protection plan.
(b) all unprotected openings in floors, edges, slabs, hatchways, and stairways are adequately guarded, fenced, or barricaded or that similar means are used to safeguard any person from falling through such openings.
(c) no person is required to work in a fall risk position unless such work is performed safely as contemplated in above.
(d) fall prevention and fall arrest equipment are.
  (i) approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
  (ii) securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
(e) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

**Where roof work is being performed on a construction site,** the Contractor must ensure that, in addition to the requirements set out above, it is indicated in the fall protection plan that:

(a) the roof work has been properly planned.
(b) the roof erectors are competent to carry out the work.
(c) no employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee.
(d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads.
(e) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
(f) suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.

**Principal Contractor / Contractor - Competency Assessment**
*(Construction Regulation 7)*

**The Principal Contractor must** be reasonably satisfied that the sub-contractors he intends to appoint also have the necessary competencies and resources to safely conduct the work they will be appointed for. This must be established at tender stage and before appointments are made.
In order to ensure this, the Principal Contractor must demonstrate to the Client that it has a suitable and sufficiently.

## 12. ADMINISTRATIVE CONTROLS AND THE OCCUPATIONAL HEALTH & SAFETY FILE

*(Construction Regulation 7)*

**The Occupational Health and Safety File**

The Principal Contractor will keep an Occupational Health and Safety File on site containing the following documents (where applicable) as a minimum:

- Accident/Incident Register. (Annexure 1 of the General Admin Regulations)
- Health and safety Representatives Inspections Register.
- Construction Vehicles & Mobile Plant Inspection.
- Daily Inspection of Vehicles.
- Plant and other Equipment by the Operator/Driver/User.
- Demolition Inspection Register.
- Electrical Installations, Equipment & Appliances. (Including Portable Electrical Tools)
- Excavations Inspection.
- Explosive Powered Tool Inspection/Maintenance/Issue/Returns Register. (incl. cartridges & nails)
- Fall Protection Inspection Register.
- First Aid Box Contents.
- Fire Equipment Inspection & Maintenance.
- False work Inspections.
- Hazardous Chemical Substances Record.
- Ladder Inspections.
- Lifting Equipment Register.
- Machinery Safety Inspection Register. (incl. machine guards, lockouts etc.)
- Scaffolding Inspections.
- Stacking & Storage Inspection.
- Inspection of Structures.
- Inspection of Pressure Equipment.
- Welding Equipment Inspections.

- All other applicable records.
- An equipment inventory register, detailing all major items of equipment such as Construction Vehicles and Mobile Plant etc…

If any work is to be performed on Airside. The contractor must perform such work must provide ACSA with an airside safety plan.

**On completion of the project or on completion of the contractors work** each contractor must surrender the completed OHS file to the Principal Contractor for consolidation into one "Master File". **A Principal Contractor must** hand over a consolidated health and safety file to ACSA upon completion of the construction work and must, in addition to the documentation referred to in **paragraph 5** of this document include a record of all drawings, designs, materials used and other similar information concerning the completed structure. (These records will then be archived by ACSA for future reference purposes)

## 13. HEALTH AND SAFETY REPRESENTATIVES

The Principal Contractor must ensure that Health and Safety Representative(s) is/are elected and delegated in writing and necessary training has been provided by a competent person where there are more than 20 employees at the workplace. A proof of training certificate must be provided to ACSA. Health and Safety Representatives must conduct monthly inspections by completing a checklist developed by the Principal Contractor. Safety defects noted must be recorded and reported to the supervisor for remedial action. Health and Safety Representative Inspection findings must be made available to ACSA for reference for audits purposes.

Health and Safety Representatives and their reports must form part of the safety committee which must meet on a monthly basis.

The Principal Contractor must hold health and safety committee meetings on site. Minutes of such meetings and action taken by management must be kept on file and made available to ACSA for reference purposes. Members of the committee must receive proper training, and a proof of such training must be made available.

The Committee must consider, at least, the Following Agenda:

- Opening & Welcome
- Present/ Apologies/ Absent
- Minutes of previous Meeting
- Matters Arising from the previous Minutes.
- OH&S Reps Reports
- Incident Reports & Investigations
- Incident /Injury Statistics
- Other Matters
- Endorsement of Registers and other statutory documents by a representative of the Principal Contractor
- Close/Next Meeting

The Principal Contractor must ensure that ACSA Safety Department is invited to such meetings. These meetings do not substitute for Principal Contractor's Site meetings.

## 14. HEALTH & SAFETY TRAINING

### Environmental Health and Safety Induction

The Principal Contractor must conduct an induction training session prior commencement of construction work. An attendance register must be kept in the Principal Contractor's health and safety file.

For any construction work to be conducted on the Airside, Airside Induction training (AIT) must be attended by all persons entering who are to enter Airside and a course fee determined by ACSA must be paid by the Principal Contractor. A security permit to access airside must be issued on production of proof of attendance.

**Induction Conducted by the Principal Contractor and Competent Person**
A manual /copy of such training must be provided to ACSA for reference purposes. As determined by the risk assessment. The Principal Contractor must ensure that all employees under his/her control are trained by a competent person and a proof of such training is kept on file for reference.

**Toolbox Talks**
The Principal Contractor must ensure that employees attend a formal Toolbox Talk to be held at least once a week. Toolbox Talks must cover a wide variety of topics related to health and safety. An attendance register must be completed by employees who attended such talks. The register must indicate the topic covered presenter, date and signatures of employees attended. Records for Toolbox Talks must be kept in a health and safety file and be made available to ACSA for perusal.

**First Aid Training**
The Principal Contractor must appoint competent First Aider(s) in writing where more than 10 employees are employed. A letter of appointment must be kept on file for reference made available to ACSA Safety. Duly designated First Aider(s) must have attended training at an accredited institution prior commencement of construction work and a proof of certificate be submitted to ACSA for reference.
The Principal Contractor must ensure that the first aid box(s) is/are controlled by qualified First Aider(s) and kept fully stocked with necessary first aid contents related to the hazards and risks identified. A first aid box(s) must be accessible, and location of such box(s) is clearly displayed on site.

## 15. FIRE PREVENTION AND PROTECTION

The Principal Contractor must ensure that adequate fire equipment is provided in strategic places (that is, where there is a mobile distribution board, flammable liquids, pressure equipment, confined spaces, hot work). The Principal Contractor must ensure that such equipment is inspected by a competent person on a monthly basis and such inspections are recorded on a register. The Principal Contractor must ensure that all fire equipment is serviceable, and person(s) have been properly trained on how to use the equipment. A proof of such training must be provided prior commencement of construction work.

## 16. EMERGENCY PREPAREDNESS

The Principal Contractor must provide ACSA with an emergency plan and procedure which will include, but not limited to emergencies such as fire, bomb threat, civil unrest, medical treatment, environmental incidents, accidents to employees and other persons other than their employees.
Emergency procedure must be communicated to employees and a proof of such training must be kept on file for reference. A list of emergency contact numbers must be conspicuously displayed on site for ease reference. An evacuation plan must be displayed in strategic places.

In case of medical and/or fire emergency contact ACSA Fire & Rescue Services:
**(021) 937 1211 or 1249**

The Principal Contractor must provide ACSA Safety with a full record of any incidents which may occur on site.

## 17. INCIDENTS/ACCIDENTS REPORTING AND INVESTIGATION

The Principal Contractor must ensure that all incidents/accidents (this includes near miss, first aid cases and section 24 cases) are reported by employees immediately to the Construction Manager for further investigation and remedial action. The Principal Contractor must ensure that all OHS Act section 24 incidents/accidents are reported to the Department of Labour immediately and preliminary investigation is conducted by a competent person within seven days. If construction work will be finished within 3 days after occurrence, an investigation must be conducted before such construction work is completed. Proof of such investigation must be submitted to ACSA immediately or within 24 hours after investigation.

## 18. PERSONAL PROTECTIVE CLOTHING/EQUIPMENT

The Principal Contractor must ensure that personal protective equipment or clothing needs analysis is conducted and incorporated into the risk assessment. Records must be provided by the Principal Contractor prior to the commencement of construction work. The Principal Contractor must ensure that SABS approved personal protective equipment, or clothing is provided to personnel. The principal

Contractor must ensure that no personnel are allowed to work on site without necessary personal protective equipment or clothing. The Principal Contractor must ensure that PPE or Clothing is kept in good working order and clearly stipulate procedures to be followed when PPE or Clothing is lost or stolen, worn or damaged. ACSA will remove any person from the construction site who is working without necessary personal protective equipment and/or clothing. Worn or tattered personal protective clothing will not be permitted on airport premises.

## 19. FALL PROTECTION (WORKING IN ELEVATED POSITIONS)

*(Construction Regulation 10)*

A pre-emptive Risk Assessment will be required for any work to be carried out above two metres from the ground or any floor level and will be classified as "Work in Elevated Positions".
As far as is practicable, any person working in an elevated position will work from a platform, ladder or other device that is at least as safe as if he/she is working at ground level and whilst working in this position be wearing and using a full body harness that will be worn to prevent the person falling from the platform, ladder or other device utilised.

This safety harness will be, as far as is possible, secured to a point away from the edge over which the person might fall and the double lanyard must be of such a length that the person will not be able to move over the edge.
In addition, any platform, slab, deck or surface forming an edge over which a person may fall must be fitted with guard rails at two different heights as prescribed in SABS 085' Code of Practice for the Design, Erection, Use and Inspection of Access Scaffolding

Workers working in elevated positions must be trained to do this safely and without risk. Proof of training must be maintained on the contractors site safety file. Medical certificates of fitness for all employees working in elevated positions must be available on site. This must be issued by an Occupational Health Practitioner.
Where work on roofs is carried out, the Risk Assessment must take into account the possibility of persons falling through fragile material, skylights, soffits and openings in the roof, steel support work trusses and purlins so designed as to support the roof structure.
The Risk Assessments shall place specific emphasis on the placing and handling of roofing materials such as Inverted Box Rib Sheeting (IBR sheeting) or similar materials, (including contingency safety measures), which when exposed to windy conditions represents a serious safety hazard.

## 20. RISK ASSESSMENT FOR CONSTRUCTION WORK

*(Construction Regulation 9)*

Every Contractor performing Construction work shall, before the commencement of any construction work and during such work, have a Risk Assessment performed by a competent person, appointed in writing, and the Risk Assessment shall form part of the OH&S Plan.
Each activity must define individual tasks associated with that identified activity. These and all associated hazards must be identified and listed in the risk assessment. This ensures that critical tasks and associated hazards are not missed.

**The Risk Assessment must include:**

- The identification of the risks and hazards to which persons may be exposed to
- The analysis and evaluation of the risks and hazards identified.
- A documented plan and applicable safe work procedures (SWP) to mitigate, reduce or control the risks and hazards that have been identified.
- A monitoring plan and
- A review plan

**A Contractor must ensure that:**

- As far as is reasonably practicable ergonomic related hazards are analysed, evaluated, and addressed.
- All employees under his/her control are informed, instructed, and trained by a competent person regarding any hazards.
- A Principal Contractor must ensure all Contractors are informed regarding any hazard as stipulated in the risk assessment before any work commences.

- Consult with health and safety committee on monitoring and review risk assessment on site.
- Ensure a copy of risk assessments is available for inspection.
- Review relevant risk assessments where changes are affected to the design or construction that result in a change to the risk profile or when an incident occurred.

N.B. A risk assessment will be performed for all unplanned work and submitted to ACSA for approval prior to work commencing.

## 21. STRUCTURES

*(Construction Regulation 11)*

**The Contractor will ensure that in terms of Construction Regulation 11 the following is adhered to**:

- That the structure on/in which works are to be performed has been inspected by a certified structural engineer declaring the structure to be safe for construction/demolition/renovations work processes.
- Steps are taken to ensure that no structure becomes unstable or poses a threat of collapse due to demolition and construction work being performed on it, or in the vicinity of it.
- No structure is overloaded to the extent where it becomes unsafe; if uncertainty arises then the structural engineer is to be consulted.
- He/she has received from the designer the following information:
- Information on known or anticipated hazards relating to the construction/demolition work and the relevant information required for the safe execution of the construction/demolition work.
- A geo-scientific report (where applicable).
- The loading the structure is designed to bear.
- The methods and sequence of the construction/demolition process.
- All drawings pertaining to the design are on site and available for inspection.

The structural engineer shall carry out inspections at appropriate and sufficient intervals of the construction work involving the design of the relevant structure to ensure compliance with the design and record the results of these inspections in writing.

## 22. EXCAVATIONS

*(Construction Regulation 13)*

The Principal Contractor must ensure excavation work is conducted under supervision of a competent person who has been appointed in writing. A letter of appointment must be provided to ACSA Safety prior commencement of work. A risk assessment outlining safe work procedures to be adhered to if excavation is more than 1.0m deep must be provided to ACSA prior commencement of work. The Principal Contractor must ensure that no person works in an excavation which is not adequately braced or shored.

The Principal Contractor must ensure that every excavation including bracing and shoring are inspected daily prior each shift starts, and such records are kept on site for reference.

The Principal Contractor must ensure that all precautionary measure as stipulated for confined spaces as stated in the General Safety Regulation of OHS Act 85/1993 are complied with when entering any excavation. The Principal Contractor must ensure that warning signs are conspicuously displayed where excavation work involves the use of explosives and a method statement developed by a competent person is provided to ACSA prior commencement.

The Principal Contractor must ensure that safe and convenient means of access is provided to every excavation when required. Such access must not be further than 6m from the point where any worker within the excavation is working.

The Principal Contractor must communicate, train and enforce safe work procedures pertaining to excavation work to his/her employees.

## 24. SCAFFOLDING

*(Construction Regulation 16)*

Access Scaffolding must be erected, used and maintained safely in accordance with Construction Regulation 16 and SA Bureau of Standards Code of Practice, SANS 10085/1 entitled, "The Design, Erection, and Use & Inspection of Access Scaffolding.
Detailed consideration must be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. It must also be ensured that there is sufficient material available to erect the scaffolding properly.
Scaffolding may only be erected, altered or dismantled by a person who has the appropriate training and experience in this type of work or under the supervision of such a person.
Specific attention must be given to the appointment of Scaffolding Inspectors and Scaffolding Erectors who shall not be the same person. The continuous inspection of scaffolding structures must be recorded on the applicable Scaffold register.
Tagging/Signs reflecting the status of the scaffold must be used and fixed to the structure at all times. (Safe to use / Scaffold not Safe)
On completion of the erection, the Supplier will inspect the structure and will ensure it is in sound working order and complies with all statutory regulations. The Supplier will then issue a Handover Certificate, Drawings, design and specifications shall be signed by a registered professional engineer.
An inspection of the completed scaffold shall also be inspected by the registered professional engineer for approval prior to use. Should any additional load i.e., a hoist or advertising banners be added to the scaffold at a later stage, the professional engineer must approve the modification.

## 25. CRANES

*(Construction Regulation 22)*

A Crane permit must be obtained from ACSA and submitted before erection of crane.
A contractor must, in addition to compliance with the Driven Machinery Regulations, 1988 ensure that where tower cranes are used—

(a) they are designed and erected under the supervision of a competent person.
(b) a relevant risk assessment and method statement are developed and applied.
(c) the effects of wind forces on the crane are taken into consideration and that a wind speed device is fitted that provides the operator with an audible warning when the wind speed exceeds the design engineer's specification.
(d) the bases for the tower cranes and tracks for rail-mounted tower cranes are firm, level and secured.
(e) the tower crane operators are competent to carry out the work safely; and
(f) the tower crane operators have a medical certificate of fitness to work in such an environment, issued by an occupational health practitioner in the form of Annexure 3.

## 26. LIFTING EQUIPMENT, TACKLE, MATERIAL HOIST AND CRANES

**The Principal Contractor must ensure** that all lifting equipment and tackle are inspected before use and a monthly register is completed by a competent person. Proof of such inspections must be recorded and kept on file for reference. The Principal Contractor must ensure that a safe working load is conspicuously displayed on lifting equipment and tackle and service certificate is provided prior commencement of work. The Principal Contractor must ensure operators are properly trained on how to operate the above-mentioned equipment and a proof of competency is provided prior commencement of work.

**The Principal Contractor must provide information on procedures to be followed in the case. of**:

(a) Malfunctioning of equipment; and
(b) Discovery of a suspected defect in the equipment

**The Principal Contractor must ensure** that safety measures stipulated in Driven Machinery Regulation and Construction Regulation with regard to above equipment are adhered to at all times.

## 27. CONSTRUCTION VEHICLES & MOBILE PLANT

*(Construction Regulation 13)*

Construction Vehicles and Mobile Plant may be inspected by ACSA prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the OHS Act and Regulations.
Construction Vehicles and Mobile Plant (CV & MP) to be:

- of acceptable design and construction
- maintained in good working order.
- used in accordance with their design and intention for which they were designed.
- Operated/driven by trained, licensed competent and authorised operators/drivers. No unauthorised persons to be allowed to drive or operate CV & MP
- Operators and drivers of CV & MP must be in possession of a valid medical certificate declaring the operator/driver physically and psychologically fit to operate or drive CV & MP.
- fitted with adequate signalling devices to make movement safe including reversing.
- excavations and other openings must be provided with sufficient barriers to prevent CV & MP from falling into same
- Provided with roll-over protection, appropriate seat fitted which shall be used during CV & MP operations.
- inspected daily before start-up by the driver/operator/user and the findings recorded in a register/logbook.
- CV & MP to be fitted with two head and two taillights whilst operating under poor visibility conditions, in addition they shall be equipped with 'hazard warning' lights, which must be used whenever the CV & MP is on site.
- No loose tools, material etc. is allowed in the driver/operator's compartment/cabin nor in the compartment in which any other persons are transported.
- CV & MP used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported.
- Operators to be issued with Personal Protective Equipment as required and identified by the Risk Assessments
- Only licensed and road worthy vehicles will be allowed on the public roads.

No person may ride on a CV & MP except in a safe place provided by the manufacturer for this purpose
The construction site must be organized to facilitate the movement of CV & MP so that pedestrians and other vehicles are not endangered. Traffic routes are to be suitable, sufficient in number and adequately demarcated.
CV & MP left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights reflectors or barricades to prevent moving traffic coming into contact with the parked CV & MP.
In addition, CV & MP left unattended after hours must be parked with all buckets, booms etc. fully lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely.
Workers employed adjacent to, or on public roads must wear reflective safety vests
All CV & MP inspection records must be kept in the OH&S File.

## 28. HOUSEKEEPING AND GENERAL SAFEGUARDING ON CONSTRUCTION SITES

*(Construction Regulation 27)*

**The Principal Contractor must** ensure that suitable housekeeping is continuously implemented on each construction site, including—

(a) the proper storage of materials and equipment.
(b) the removal of scrap, waste and debris at appropriate intervals.

(c) 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.
(d) ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals.
(e) 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
(f) 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.

**The Principal Contractor must** ensure that safety precautionary measures stipulated in Environmental Regulations for Workplaces and Construction Regulations and Construction Environmental Specification are adhered to at all times.

## 29. STACKING AND STORAGE ON CONSTRUCTION SITES

*(Construction Regulation 28)*

**The Principal Contractor must ensure contractor must ensure that:**

(a) a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site.
(b) adequate storage areas are provided.
(c) there are demarcated storage areas; and
(d) storage areas are kept neat and under control a competent person is appointed in writing with a duty of supervising all stacking and storage on a construction work or site. A proof of such appointment must be provided prior commencement of construction work. The Principal Contractor must ensure that stacking is conducted under supervision and good housekeeping is maintained at all times.

## 30. FIRE PRECAUTIONS ON CONSTRUCTION SITES

*(Construction Regulation 29)*

**The Principal Contractor must ensure that:**

(a) all appropriate measures are taken to avoid the risk of fire.
(b) sufficient and suitable storage is provided for flammable liquids, solids and gases.
(c) smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials.
(d) in confined spaces and other places in which flammable gases, vapours or dust can cause danger—
    (i) only suitably protected electrical installations and equipment, including portable lights, are used.
    (ii) there are no flames or similar means of ignition.
    (iii) there are conspicuous notices prohibiting smoking.
    (iv) oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
    (v) adequate ventilation is provided.
(e) combustible materials do not accumulate on the construction site.
(f) welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire.
(g) 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.
(h) the fire equipment contemplated in paragraph (g) is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof.
(i) a sufficient number of workers are trained in the use of fire- extinguishing equipment.

(j) where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire.
(k) the means of escape is kept clear at all times.
(l) there is an effective evacuation plan providing for all—
(i) persons to be evacuated speedily without panic.
(ii) persons to be accounted for; and
(iii) plant and processes to be shut down; and
(m) a siren is installed and sounded in the event of a fire.

**31. CONSTRUCTION EMPLOYEES' FACILITIES**

*(Construction Regulation 30)*

**A Contractor must** provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

(a) Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons.
(b) at least one sanitary facility for each sex and for every 30 workers.
(c) changing facilities for each sex; and
(d) sheltered eating areas.

**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.

**32. LADDERS**

The Principal Contractor must ensure that all ladders are numbered, inspected before use and monthly inspections are recorded in a register. The Principal Contractor must ensure that a competent person who carries the above inspections is appointed in writing.

**33. PRESSURE EQUIPMENT**

The Principal Contractor must ensure that pressure equipment is identified, numbered and entered in a register. Furthermore he/she must ensure that inspections are carried out and certificates of testing are available and kept on file as per the Regulations.

**34. EMPLOYEES EXPOSED TO EXCESSIVE NOISE**

The Principal Contractor must ensure that all employees exposed to excessive noise, equal or above 85 dB(A), have undergone a baseline audiometric test prior commencement of construction work and SABS approved ear protection is provided and worn at all times.

**35. PUBLIC SAFETY AND SECURITY**

The Principal Contractor must ensure that notices and signs are conspicuously displayed at the entrance and along the perimeter fence indicating "No Unauthorized Entry", "Visitors to report to office", "helmet and safety shoes" etc.

Health and safety signage must be well maintained throughout the project. This must entail cleaning, inspection and replacement of missing or damaged signage.

Furthermore, the Principal Contractor must ensure that:

a) Nets, canopies, fans etc. are provided to protect the public passing or entering the site.
b) A security guard is provided where necessary and provided with a way of communication and an access control measures or register is in place.
c) All visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site.

**36. HOT WORK**

The Principal Contractor must ensure that ACSA Fire & Rescue Department is notified of any hot work to be conducted during construction work. A hot work permit accompanied with a gas free certificate must be issued to the relevant Principal Contractor by ACSA Fire & Rescue Department when satisfied that the area is safe and that the Principal Contractor understands the procedure. The Principal Contractor must ensure that a hot work procedure is adhered to at all times by his/her employees.

## 37. HIRED PLANT AND MACHINERY

The Principal Contractor must ensure that any hired plant and/or machinery brought to site is inspected by a competent person before use and records confirming that it is safe for use are provided prior usage of such equipment. Such plant or machinery complies at all times with the requirements of the Occupational Health & Safety Act.

The Principal Contractor must ensure that hired operators receive induction prior commencement of work and that said hired operators have proof of competency.

The Principal Contractor must provide information on procedures to be followed in the case of:

(a) Malfunctioning of equipment; and
(b) Discovery of a suspected defect in the equipment

## 38. EDGE PROTECTION AND PENETRATION

The Principal Contractor must ensure that all exposed edges and floor openings are guarded and demarcated at all times until permanent protection has been erected. Guardrails used for edge protection must be 500mm and 900mm apart (double railing) above the platform/ floor surface.

The Principal Contractors fall protection plan must include the procedure to be followed regarding the management of edge protection and penetration.

## 39. CONFINED SPACE ENTRY

The Principal Contractor must ensure that all necessary health and safety provisions prescribed in the General Safety Regulations are complied with when entering confined spaces.

## 40. LIQUOR, DRUGS, DANGEROUS WEAPONS, FIREARMS

The Principal Contractor must ensure that no person is allowed on site that appears to be under the influence of intoxicating liquor or drugs.

The Principal Contractor must encourage his/her workforce to disclose the medication that poses a health and safety threat towards his/her fellow employees. No person must be allowed to enter the site and work if the side effects of such medication do constitute a threat to the health or safety of the person concerned or others at such workplace.

No dangerous weapons or firearms allowed on the construction site.

## 41. INTERNAL/EXTERNAL AUDITS

The Principal Contractor must conduct monthly safety, health and environment audits and such records must be kept on site. The Principal Contractor must ensure that corrective measures are taken to ensure compliance.

ACSA must conduct monthly audits and defects noted must be reported to the relevant Principal Contractor for remedial action. Inspections must be conducted by ACSA and non-conformances noted must be recorded and provided to the relevant Principal Contractor for remedial action. ACSA must stop any Principal Contractor from executing any construction work which is not in accordance with the health and safety plan.

The Principal Contractor must ensure that all necessary documents stipulated in this document are kept on the health and safety file and made available when requested.

## 42. PENALTIES

Penalties will be imposed by ACSA on Principal Contractors who are found to be infringing these specifications, legislation and safety plans.

The Principal Contractor will be advised in writing of the nature of the infringement and the amount therefor. The Principal Contractor must determine how to recover the fine from the relevant employee and/or sub-contractor. The Principal Contractor must also take the necessary steps (e.g., training) to prevent a recurrence of the infringement and must advise ACSA accordingly. the Principal Contractor is also advised that the imposition of penalties does not replace any legal proceedings.

Penalties will be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by the ACSA SHE Representative and will be final. In addition to the penalties, the Principal Contractor must be required to make good any damage caused as a result of the infringement at his/her own expense.

The preliminary list below outlines typical infringements against which ACSA may raise penalties; however, this list must not be construed as final:

- Failure to keep a copy of OHS ACT on site.
- Failure to maintain an up-to-date letter of good standing with the Compensation Commissioner / FEM.
- Working on site without attending Safety Induction Training.
- Failure to conduct Safety Induction for personnel and visitors on site.
- Failure to issue and wear Personal Protective Clothing and Equipment.
- Failure to fully stock first aid box in accordance with the risks identified.
- Failure to disclose or report first aid cases and /or minor/major/fatalities as prescribed by the OHS ACT.
- Failure to adhere to written safe work procedure as stipulated in the Hazard Identification and Risk Assessment and safety plan.
- Failure to maintain records and registers as per the OHS Act of 1993 and its regulations.
- Failure to conduct audits and inspections as required by legislation.
- Keeping un-serviced fire equipment on site.
- Failure to make use of ablution facilities.
- Failure to remove personnel on site who appears to be under the influence of intoxicating liquor or drugs.
- Failure to close out previously raised non-conformances.
- Failure to make and update legislative appointments.
- Failure to adhere to the OHS Act of 1993 and its regulations.

I, _____(name & surname) of _____(company)
Upon receipt of this specification, agree and acknowledge ACSA's right to impose penalties should I or any of my employees or contractors fail to comply with these conditions.

Signed: _____

On this date: _____(dd/mm/yyyy)

At: _____(Airport Name)

## C4.5 Baseline HIRA - Risk Assessment

| Baseline Risk Assessment | |
|---|---|
| Project Name: | Design and develop stage 1-3 design for Building Management system (BMS) for Cape Town International Airport for period of six (6) months |
| Document Number: HIRA 1 | Revision Number: 001 |

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

## C4.6 ACSA Generic Hazard Assessment

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

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

## Annexure C3 – Generic Hazard assessment

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

| | | | | |
|---|---|---|---|---|
| Vehicles on airside | Accidents and injuries | Damage to aircraft/vehicles/property/persons | All vehicles operating on the Airside are to be fitted with a strobe light, appropriate signage in the form of a prefix, have the necessary vehicle permit in place, to be fitted with a fire extinguisher and is to be serviceable. Vehicles are to be checked by Airside Safety prior to be granted Airside access | 4A |
| Driving on airside | Incidents | Damage to aircraft/ vehicles/property/ persons | Airside induction is required for all persons entering the Airside. For persons wishing to drive on the Airside Service Road an AVOP 2 permit is required. Where work is to be conducted on the Airfield, then contractors are required to be under escorts or have undergone Radio Licence training and be in the possession of an AVOP 3 permit<br>the speed limit on the Apron Service Roads is 30km/h, 15km/h at the back.<br>of stand and 60km/h on the Perimeter Road. During period of Low Visibility (LVP) will be affected and no vehicular movements are allowed on the Airfield. Low visibility procedures will be in place | 4A |
| Driving on runways and taxiways without permission | Incursion (include definition) | Collision with aircraft/property damage or fatality/ies | Runway and taxiway markings are indicated as per ICAO Annex 14. Permission is required from Air Traffic Control when crossing runways and taxiways. Signage indicating movement areas are painted on the ground or by means of illuminated signage boxes. Only persons in possession of a valid Airside Vehicle Operators Permit with the necessary radio licence (Partac training) will be permitted to drive in restricted areas. Vehicles under escort must follow at reasonable distance. | 3A |

| | | | | |
|---|---|---|---|---|
| Noise | Health Risks | Noise induced hearing loss | Baseline and annual audiograms are to be conducted. Contractors are to implement a hearing conservation programme and issue staff with hearing protection and provide the necessary training in this regard. Contractors to identify noisy operations in passenger areas and are to conduct noise generating operations at off peak times were possible or if unavoidable with ACSA's Project Leaders written permission. | 3B |
| Construction works | Foreign Object Debris (FOD) | Ingestion into aircraft engine | Airside induction is required for all staff working on the Airside, FOD bins are to be used for any FOD found lying on the ground. All waste to be secured to prevent it from becoming airborne (refer to Environmental Terms and Conditions) | 4B |
| Construction works | Storage of hazardous chemicals substances | Contamination/fire/ injury to persons/ environmental impact | ACSA's Environmental terms and conditions are to be adhered to. All relevant legislation and bylaws are to be adhered to. All necessary permits are to be applied for by the contractor such as transport permits, possession permits and flammable certificates. ACSA Environment and Fire and Rescue to be notified where a spill occurs. | 4B |
| Construction works | Waste | Attracts rodents and birds which leads to bird strikes and adds to FOD | Waste management to be implemented in line with ACSA's Environmental Terms and Conditions | 4B |

| | | | | |
|---|---|---|---|---|
| Construction works/ Trenching | Damage to underground services. Interruption of critical services | Electrocution, loss of critical services, damage to property, major injuries, aircraft diversions | Consult as-built plans. Scan area before trenching. Trenching to be done under competent supervision. | 4A |
| Delivery of materials | Falling materials, stones, or sand | Vehicle/pedestrian accidents | Materials are to be delivered within specified time frames, flagman to be utilised during deliveries, load limitations to be observed, netting is to be used, contractors to clean road. after deliveries | 4E |
| Lack of signage – warning signs | Injuries and accidents | Injuries and accidents | Contractors to install sufficient demarcations around construction sites along with the necessary warning signs and beacon lights (refer to Construction Regulations and Traffic Act) No signs are to be removed without prior permission and notification. Temporary way finding signage is required if signage has been disturbed | 2D |
| Road crossing Central Boulevard | Not using the tunnel for crossing | Vehicle and pedestrian accidents | Contractor staff are to cross the Boulevard via the North or South tunnels | 4B |
| Waste management | Environmental impact | Illegal dumping | Temporary laydown areas to be identified and no illegal dumping is permitted. | 3C |
| Trolleys | Damaging trolleys through misuse | Injuries and property damage | Contractors to provide their own trolleys. ACSA's trolleys are for passenger use only | 5D |
| Fire equipment | Use and abuse of fire equipment | Injuries and property damage | Fire equipment is only to be used during emergencies. Contractors to provide their own fire equipment. No materials to be stored in ACSA fire cabinets. Emergency exits are to be kept clear at all times | 2B |

| | | | | |
|---|---|---|---|---|
| Unattended bags | Security risk | injuries/fatality to Airport users/stakeholders/ACSA employees. Bomb threat-damage to property, vehicle. Operational disruptions | Contractors are not permitted to leave bags unattended as they will be removed and will be handed to SAPS | 5C |
| Speed limits | Car accidents | Injuries and vehicle damage | Speed limits on the Central Boulevard and Elevated Road are 40km/h, exiting the road networks is 50km/h, Tower Road is 50km/h and Freight Road is 50km/h. Speed humps are installed along Tower Road and Freight Road to reduce speeding | 3C |
| Deliveries | Elevated Road | Disrupt traffic flow and passenger movements | No trucks allowed deliveries to be done via North or South Delivery Yards, delivery notes are required, and delivery times are to be specified. | 2C |
| Overhead works | Falling items | Injuries, vehicles, property damage | Fall protection plan required as per the Construction Regulations 2014. | 5C |
| General housekeeping | Damage to escalators | Injuries, property damages | Escalators are not used to transport heavy items in the Parkade | 4C |

## C4.7 – ACSA Service & Maintenance Contractors Environmental Terms and Conditions to Commence Work - EMS 048

The following Environmental Terms and Conditions shall be strictly adhered to by all contractors when conducting works for ACSA. ACSA shall audit contractor activities, products and services on an ad hoc basis to ensure compliance to these environmental conditions. Any pollution clean-up costs shall be borne by the contractor.

| ISSUE | REQUIREMENT |
|---|---|
| **Environmental Policy** | ACSA's Environmental Policy shall be communicated, comprehended and implemented by all ACSA appointed contractor staff (see attached Environmental Policy). |
| **Stormwater, Soil and Groundwater Pollution** | • No solid or liquid material may be permitted to contaminate or potentially contaminate stormwater, soil or groundwater resources.<br>• Any pollution that risks contamination of these resources must be cleaned-up immediately. Spills must be reported to ACSA immediately. Contractors shall supply their own suitable clean-up materials where required.<br>• Washing, maintenance and refuelling of equipment shall only be allowed in designated service areas on ACSA property. It is the contractor's responsibility to determine the location of these areas.<br>• No leaking equipment or vehicles shall be permitted on the airport. |
| **Air Pollution** | • Dust: Dust resulting from work activities that could cause a nuisance to employees, or the public shall be kept to a minimum.<br>• Odours and emissions: All practical measures shall be taken to reduce unpleasant odours and emissions generated from work related activities.<br>• Fires: No open fires shall be permitted on site. |
| **Noise Pollution** | • All reasonable measures shall be taken to minimise noise generated on site as a result of work operations.<br>• The Contractor shall comply with the applicable regulations with regard to noise. |
| **Waste Management** | • Waste shall be separated as general or hazardous waste.<br>• General and hazardous waste shall be disposed of appropriately at a permitted landfill site should recycling or re-use of waste is not feasible.<br>• Under no circumstances shall solid or liquid waste be dumped, buried or burnt.<br>• Contractors shall maintain a tidy, litter free environment at all times in their work area.<br>• Contractors must keep on file:<br>1. The name of the contracting waste company<br>2. Waste disposal site used.<br>3. Monthly reports on quantities – separated into general, hazardous, and recycled.<br>4. Maintained file of all Waste Manifest Documents and Certificates of Safe Disposal<br>5. Copy of waste permit for disposal site<br>This information must be available during audits and inspections. |
| **Handling & Storage of Hazardous Chemical Substances (HCS)** | • All HCS shall be clearly labelled, stored and handled in accordance with Materials Safety Data Sheets.<br>• Materials Safety Data Sheets shall be stored with all HCS.<br>• All spillages of HCS must be cleaned-up immediately and disposed of as hazardous waste. (HCS spillages must be reported to ACSA immediately).<br>• All contractors shall be adequately informed with regards to the handling and storage of hazardous substances.<br>• Contractors shall comply with all relevant national, regional and local legislation with regard to the transport, storage, use and disposal of hazardous substances. |
| **Water and Energy Consumption** | ACSA promotes the conservation of water and energy resources. The contractor shall identify and manage those work activities that may result in water and energy wastage. |

| | |
|---|---|
| **Training & Awareness** | The conditions outlined in this permit shall be communicated to all contractors and their employees prior to commencing works at the airport. |

**Penalties**
Penalties shall be imposed by ACSA on Contractors who are found to be infringing these requirements and/or legislation. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall take the necessary steps (e.g., training/remediation) to prevent a recurrence of the infringement and shall advise ACSA accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings, the Council, authorities, landowners and/or members of the public may institute against the Contractor.

Penalties shall be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by ACSA's Airport Environmental Management Representative in consultation with the Airport Manager or his/her designate and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused as a result of the infringement at his/her own expense.

I, _____(name & surname) of _____(company)

agree to the above conditions and acknowledge ACSA's right to impose penalties should I or any of my employees or sub-contractors fail to comply with these conditions.

Signed: _____ on this date: _____(dd/mm/yyyy)
at: _____(airport name).

# C4.8 ACSA Construction Environmental Management Plan – EMS 050

1. Background

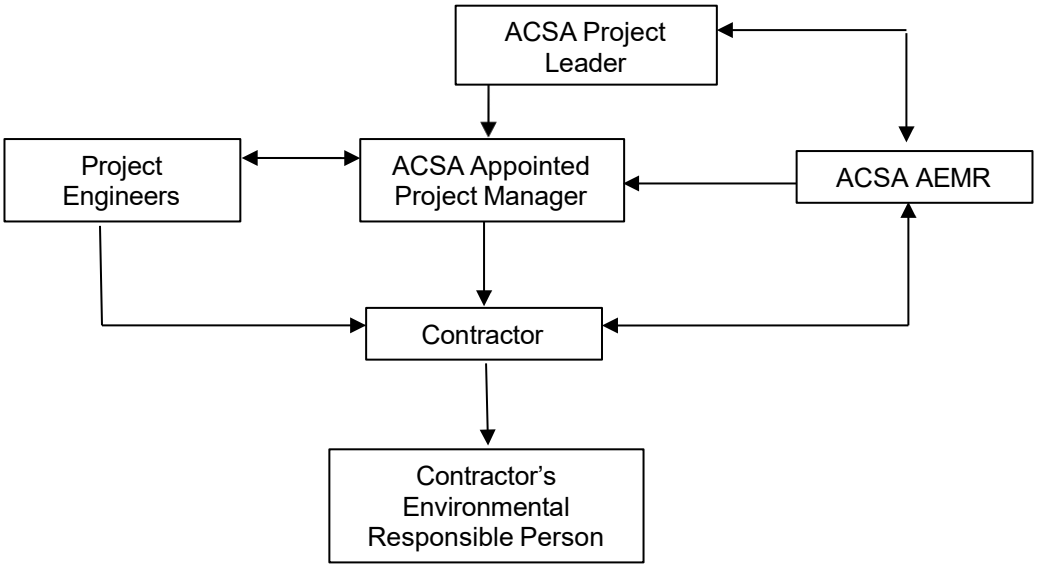
The purpose of this Environmental Management Plan (EMP) is to co-ordinate mitigation, rehabilitation, and monitoring measures of construction projects at ACSA airports such that environmental pollution and risks are minimized as far as possible.

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

2. Organisational Structure

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

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



2.1 Employer Project Leader

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

2.2 Project Manager (PM)

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

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

2.3 Contractor

- The Contractor shall ensure that all employees, sub-contractors, suppliers, etc. are fully aware of and comply with the environmental issues and requirements detailed in this EMP.
- The Contractor shall liaise closely with their Environmental Responsible Person and PM and will ensure that works on site are conducted in accordance with this EMP.
- The Contractor is to have a copy of the EMP on site and be familiar with its contents.
- The Contractor must ensure that all employees (permanent and temporary) and all sub-contractors that work on the site for longer than two days, receive Environmental Awareness Training prior to commencing work on site.
- The Contractor shall appoint an Environmental Responsible Person in writing, and will forward this appointment to ACSA's AEMR
- Prior to construction commencement, the Contractor shall draft and submit written environmental method statements to ACSA's AEMR for approval, covering those activities which are identified (in this document and/or by the AEMR), as being potentially harmful to the environment.

Environmental Method Statements indicate how compliance shall be achieved, and environmental risk will be mitigated. The environmental method statement shall state clearly:

- Timing of activities
- Materials to be used.
- Equipment and staffing requirements
- The proposed construction procedure designed to implement the relevant environmental specifications.
- The system to be implemented to ensure compliance with the above; and
- Other information deemed necessary by the AEMR and Environmental Responsible Person.

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

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

2.4 Contractor's Environmental Responsible Person

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

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

2.5 ACSA's AEMR shall:

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

3. Environmental Specifications

3.1 Location of camp and depot

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

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

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

3.2 Demarcation of the site & access

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

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

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

3.3 Traffic control & safety

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

3.4 Ablution facilities

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

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

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

Abluting anywhere other than in the toilets shall not be permitted. Repeated use of the veld or other areas for 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.

3.5 Domestic wastewater

Wastewater 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.

3.6 Environmental training

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

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

- All personnel working on the construction site must attend an environmental awareness training workshop conducted by the Environmental Responsible Person prior to commencing work on site. The purpose of the workshop is to provide staff with the information they require to enable them to meet the requirements of the EMP. The Environmental Responsible Person may call upon the services of a specialist environmental education translator should this be required. Contractors, sub-contractors and all their staff must attend.
- The Environmental Responsible Person shall keep a register of all personnel attending the environmental awareness training workshops; attendance records must be filed and available on site.
- All staff must be trained in emergency response procedures; attendance records must be filed and available on site.
- Environmental awareness posters are to be displayed on site. Environmental 'do's and don'ts' must be clearly illustrated. The posters shall use pictures to convey the intended message, and any explanatory text will be in English and the local dialect.

3.7 Solid waste management

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

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

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

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

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

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

Recyclable waste shall be deposited in separate skips/bins and removed off site for recycling. The Contractor may wish to enter into an agreement with the surrounding communities and/or his staff with regard to the collection and sale of recyclable and reusable 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 Environmental Responsible Person, the Contractor shall obtain the advice of a specialist waste expert concerning the storage of hazardous waste. Such waste shall be disposed of off-site by a specialist waste contractor, at a licensed hazardous waste disposal site. The Contractor shall keep documentary proof of the safe disposal of all waste, which will be available for audit at all times and will also include the waste type and volume.

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

3.8 Protection of fauna and flora

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

3.9 Protection of archaeological and palaeontological sites

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

3.10 Water pollution prevention & management

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

the prevention of water pollution, including the pollution of groundwater and any wetland on site.

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

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

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

3.11 Stormwater control

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

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

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

3.12 Water resource management

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

3.13 Pollution prevention and remediation

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

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

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

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

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

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

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

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.

3.14 Servicing/fuelling of construction equipment

Servicing and fuelling should preferably occur off site.

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

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

3.15 Fuels and Chemicals

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

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

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

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

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

3.16 Fuel & Hazardous Materials Storage

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

Contractors shall ensure that the quantities of fuels and chemicals on site are appropriate to the requirements, are stored, and handled so as to avoid the risk of spillage. All fuels, oils and chemicals shall be confined to a specific and secured area. These materials shall be stored in an area with a concrete or other impervious base, which is adequately bunded. The volume of the bund shall be two times the volume of the containers stored. Gas and fuel should not be stored in the same storage area, and any generators used on the site should also be placed on a bunded surface.

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

In addition, the following must be implemented:

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

3.17 Dust control

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

3.18 Noise control

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

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

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

3.19 Emergency procedures

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

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

3.19.1 Fires

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

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

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

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

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

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

4. SITE CLEARANCE & REHABILITATION

4.1 Removal of topsoil

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

4.2 Stabilization of steep slopes

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

4.3 Rehabilitation

The Contractor shall be responsible for rehabilitating any areas cleared or disturbed for construction purposes that are to be incorporated into open space or buffer zones, as well as

all spoiling. The Contractor shall revegetate such areas in accordance with the specification provided below.

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

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

4.4 Landscaping and preparation for re-vegetation

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

5. MANAGEMENT AND MONITORING

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

5.1 General inspection monitoring and reporting

The Environmental Responsible Person shall:

- Inspect the site on a daily basis to ensure that the environmental specifications are adhered to.
- Maintain a record of major incidents (spills, impacts, complaints, legal transgressions etc) as well as corrective and preventive actions taken.
- Conduct regular internal audits (at least weekly) to ensure that the system for implementation of the EMP is operating effectively and keep records of these audits.
- Conduct monthly meetings for the duration of the project. These will be attended by the Environmental Responsible Person, Contractors Resident Engineers and sub-contractor representatives, and will be minuted and available for audit. The agenda will cover compliance with the EMP and environmental method statements, results of audits, non-compliances and corrective and preventative actions with agreed dates, and environmental queries.

5.2 Penalties

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

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings the Council, authorities, landowners and/or members of the public may institute against the Contractor.

Penalties may range between R200.00 and R20, 000.00, depending upon the severity of the infringement. The decision on how much to impose will be made by the AEMR and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused as a result of the infringement at his own expense.

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

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

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

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

# C4.9 Environmental Management System Policy

AIRPORTS COMPANY
SOUTH AFRICA

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

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

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

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

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

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

**Signed:** 

**Date:** 05/03/2021
**Issue No: 11**

**Chief Executive Officer: Airports Company South Africa SOC Limited.**

## acsC4.10 Environmental Management System

### 1. Scope

This procedure is intended for all ACSA Service and Maintenance Contractors whose activities, products and services may produce a negative impact on the environment at ACSA Operated Airports.

### 2. Objective

To incorporate all service and maintenance contractors into ACSA's Environmental Management System (EMS), to align activities, products, and services with the EMS and ACSA's Environmental Policy.

### 3. Definitions and Abbreviations

**ACSA**
Airports Company South Africa SOC Ltd

**ACSA AEMR**
ACSA Airport Environmental Management Representative

**ARFFS**
Aerodrome Rescue and Fire Fighting Services

**HCS**
Handling & Storage of Hazardous Chemical Substances

**SHE**
Safety, Health, and Environment

**Service & Maintenance Contractor**
An ACSA appointed service or maintenance provider assigned to carry out repairs, upgrades, installations, and on-going maintenance of airport infrastructure. Service contractors (e.g., cleansing, landscaping, pest removal, hygiene, sanitation) or maintenance contractors (e.g., electricians, plumbers, mechanics) may have long-term contracts or provide services on an ad-hoc basis.

### 4. Procedure General

4.1 All ACSA departments shall contact the airport's ACSA AEMR prior to appointing a service or maintenance contractor on the airport.

4.1.1 All new or renewed service and maintenance contractors shall be screened for significant environmental aspects by the airport's ACSA AEMR. Refer ACSA EMS Department Determining Significant Environmental Aspects Procedure - T010 001M. Any new significant environmental aspects shall be documented in the aspects register, and control measures implemented accordingly.

4.2 The ACSA AEMR shall decide whether or not the contractor requires formal environmental induction training based on Point 4.1.1 above. If training is required, it.

shall be conducted by the relevant contractor's responsible person/supervisor prior to commencing work on the airport.

4.3 The ACSA Department responsible for appointing service or maintenance contractors shall append the ACSA Service and Maintenance Contractors Environmental Terms and Conditions to Commence Work - EMS 048 permit to tender documents, contract documents, service level agreements or bill/schedule of quantities specifications. This will allow contractors to accommodate any unforeseen costs, to minimise environmental risk, or ensure compliance. Prior to commencement of works, contractors shall sign this permit, a copy of which shall be kept by both the responsible ACSA Department and the contractor.

4.4 The contractor's representative shall ensure the conditions set out in the ACSA Service and Maintenance Contractors Environmental Terms and Conditions to Commence Work - EMS 048, along with ACSA's Environmental Management System Policy are communicated to, comprehended and implemented by all contractor staff.

4.5 All ACSA Departments making use of contractors shall keep an up-to-date register of contractors on site. This register shall include the name of the contracting company, the site supervisor/manager and his/her contact number, the nature of works and work area, the date of commencement and expected completion of the work, and whether the ACSA Service and Maintenance Contractors Environmental Terms and Conditions to Commence Work - EMS 048 permit has been duly signed. In addition, contractor tender documents, contract documents, service level agreements or bill/schedule of quantities specifications shall be available for audit/inspection by the ACSA AEMR.

4.6 Contractor activities shall be audited at the discretion of the ACSA AEMR depending on the nature of risks and environmental aspect significance.

## 5. Roles and Responsibilities

| Issues | Responsible Person | Alternate |
|---|---|---|
| Has overall responsibility for adherence to this Operational Procedure | ACSA General Manager or Airport Manager | Relevant designated person shall assume responsibility |
| Has responsibility for adherence and implementation of this Operational Procedure | ACSA Safety Manager/ ACSA ARFFS Manager/ ACSA HOD: SHE/ ACSA AEMR | Relevant designated person shall assume responsibility |

## 6. Verification

This procedure shall be verified in accordance with ACSA Verification Policy, Procedure and Working Instruction - Z001 002M.

## 7. Non-Conformance

Any deviation from this procedure shall be identified and registered with corrective and preventative measures for continual improvement in accordance with the ACSA Non Conformance Policy, Procedure and Working Instruction - Z001 001M.

## 8. References

ACSA Non-Conformance Policy, Procedure and Working Instruction - Z001 001M

ACSA Verification Policy, Procedure and Working Instruction - Z001 002M.

ACSA Change Control Policy, Procedure and Working Instruction - Z001 003M

ACSA Document Control Procedure - Z001 006M.

ACSA Record Keeping Requirements Procedure - Z001 008M

ACSA Airfield Standard Operating Procedure Manual

## 9. Change Control

This procedure shall only be changed with the authorisation of the ACSA Group Executive: Airport Operations and in accordance with ACSA Change Control Policy, Procedure and Working Instruction - Z001 003M.

## 10. Records

| Record Name | Storage Location | Record Number | Responsible Person | Retention Time |
|---|---|---|---|---|
| ACSA Service & Maintenance Contractors Environmental Terms and Conditions to Commence Work | ACSA Safety Department | EMS 048 | ACSA AEMR | Five (5) years |
| ACSA Service and Maintenance Contractors Procedure | ACSA Master Document Control Office | T050 009M | ACSA Senior Administrator: Policies and Procedures | Five (5) years |

## 11. Endorsement (See ACSA Master File in Document Control Office, Corporate)

AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

**C4.11 Hoarding Specification Handbook**

CAPE TOWN
INTERNATIONAL AIRPORT
AIRPORTS COMPANY SOUTH AFRICA

# HOARDING SPECIFICATION HANDBOOK

## 1.0 Introduction

The manual was produced by ACSA-ORTIA Project Management Division as reference to consultants, contractors and other persons who intend to execute any construction works at the O.R. Tambo International Airport.

It is important to note that the application of hoarding specifications as detailed herein is the ACSA-ORTIA Standard and must be issued to every (Hoarding) Contractor for implementation prior to execution of any hoarding work. It is the responsibility of the consultants and contractor to verify the latest revision with the ACSA-CTIA Project Manager, Project Management Division.

Failure to verify all requirements of all hoarding finishes internal and externally may result in the contractor having to incur additional costs for alterations.

The scope of hoarding work should always be part of the construction programme and a major priority for any construction work to commence on site for ACSA-CTIA. The Project Team must inform contractors at tender stage that working on the airport environment will require them to execute hoarding work outside normal working hours.

It is envisaged that the manual will be informative enough to everyone involved but in certain areas the specification for internal and external hoarding may not be applicable, such exceptions will be addressed as they arise and must be referred to the ACSA-CTIA Project Manager.

All hoarding remains the property of ACSA (if paid for in Preliminaries) but must be removed off site by the contractor on completion of the project subject to further instruction by the ACSA- CTIA Project Manager.

## 2.0 Types of Hoardings

2.0.1 Type A. *(See Detail A)*

This type of internal hoarding will be applicable where construction work takes place adjacent to other tenants to minimise noise, dust and visual screening.

**Construction and Material**

The construction method is of permanent nature and uses the existing building structure for secure fixing, i.e., fixed to the roof structure and the floor.

The framework consists of galvanised floor track 61 mm wide fixed to the floor and soffit with suitable fasteners at 600 mm centres minimum.

The board on the public side will be 16 mm chipboard with melamine finish (Grey Cambrink) and on the construction side can be either 12 mm chipboard for heavy usage or 12, 7 mm Gypsum plasterboard for lighter usage.

NB: Heavy usage when shelving is to be hung onto the walls or when any other fixing onto the walls is required.

Lighter usage when no hanging is to be done onto the walls.

The melamine boards are cut into module width of 900 mm or 1200 mm and the heights will be those that can be manoeuvred by human labourers without any hindrance to the public where applicable, preferably 3000 high.

The melamine board will be held in place by a top hat section on the vertical joint, colour black. The back board will be screwed directly to the grid.

Where soundproofing is required, the hoarding will be filled with an approved insulating material.

2.0.2 Type B. *(see detail A)*


The method of construction is similar to Permanent type except that the hoarding is only on the public side and is melamine finish (Grey Cambrink).

**Construction and Material**

The construction method will match that of the Permanent hoarding on the public side only and no finishes on the construction side.

No insulation for this type of hoarding will be required.

2.0.3 Type C.

This type of hoarding is made out of 2100 h X 900 w melamine faced (Grey Cambrink) chipboard panel on metal supports. Generally, it will consist of four to six panels that can be placed around a particular area for maintenance or repair to floors.

**Construction and Material**

The panels off-cuts can be easily acquired from the hardware outlets and the steel support frame must be fixed to the panel to prevent the panels from falling over.

2.0.4 Type D.


Yellow New Jersey barriers or orange plastic netting (at the discretion of the ORTIA-Project Manager) must be used to barricade the construction site from the public prior to construction work taking place.

**Construction and Material**

Steel post at 3000 mm maximum apart onto which the orange plastic netting is attached to.

Water filled yellow New Jersey barrier used to block roadway temporarily during repairs or entrance roadway prior to construction work taking place.

Note:

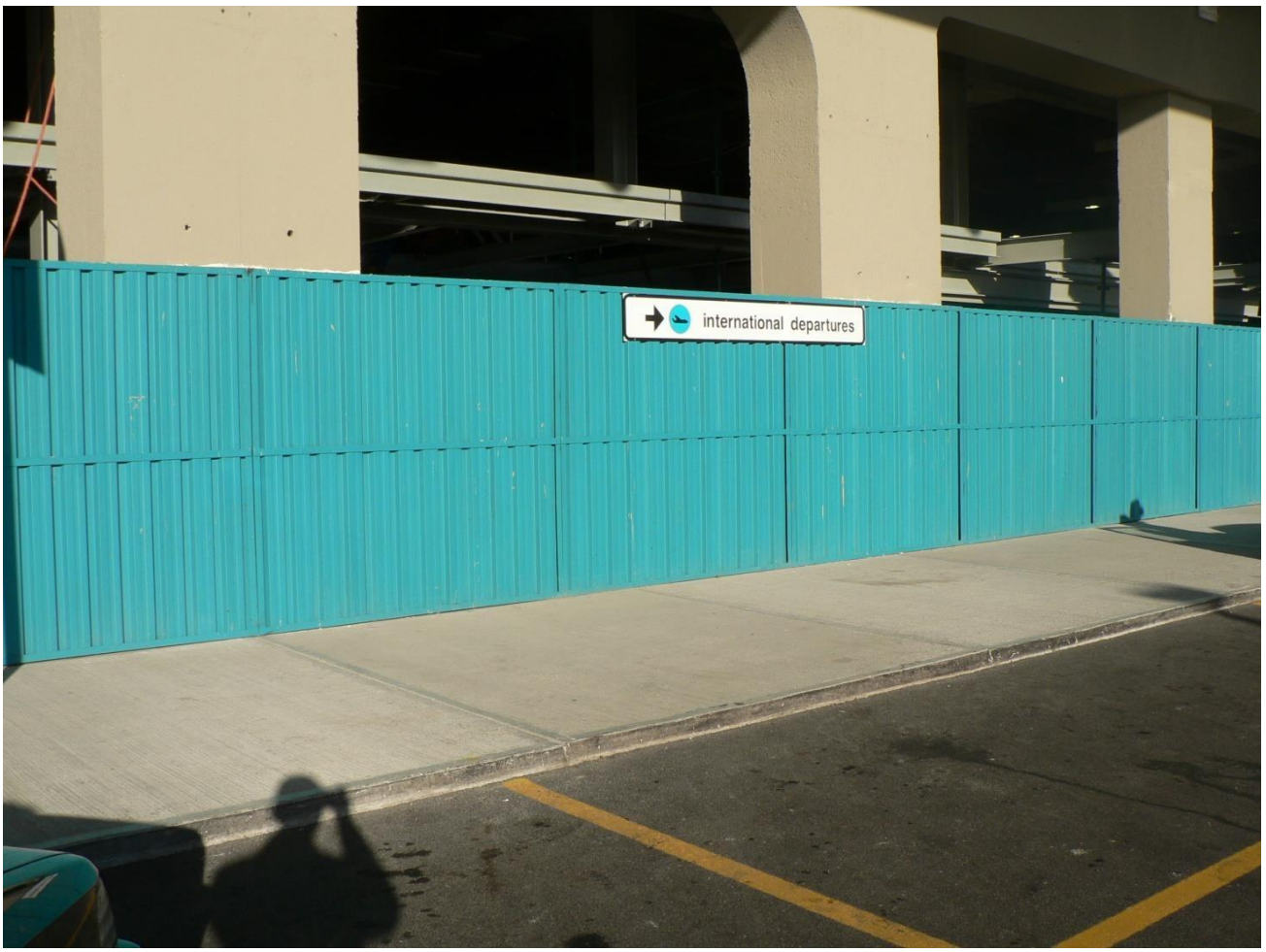
High impact industrial moulded, interlocking plastic barriers to be filled with water to make it stable and not movable. The hoarding must be kept neat and tidy at all times.

2.0.5 Type E

This hoarding must remain in place for the duration of the construction period and is only removed at the end of construction when all the work has been completed.

Either one of two types of hoarding is acceptable, viz. Sheet metal and Pre-cast concrete hoarding mainly used for site establishment.

2.0.6 Type F.




The sheet metal hoarding must be a minimum of 2000mm high around the perimeter of the construction site establishment. (See detail B)

**Construction and Material**

The IBR/Corrugated sheeting must be fixed onto steel or timber posts, with horizontal steel members positioned at the top, centre and bottom to secure the sheeting firmly. The sheet metal is to extend to ground level or floor finish level i.e.: no gaps are permitted.

2.0.7 Type G.

Pre-cast panel and pole hoarding will be used when indicated by ACSA. This hoarding will be used for contractor yards that will be used for extended periods of time. Specifications to be confirmed by the ACSA Project Manager.

2.0.8 Type H.


These are concrete panels 2100 h X 1500 w X 200 thick similar to the concrete walls around the airport site.

The panel thickness slopes from the top to the bottom, thus the thickness at the top of the panel are 100 mm. The base extends 500 mm on either side of the centre of panel for support. These panels can be used for permanent or temporary purposes.

**Construction and Material**

These panels are constructed out of concrete; the inner surface shaped according to the shattering used on the public side should be roughcast to give a permanent appealing appearance. Where this panels are permanently installed closer to Terminals, they should be painted in colour specified below for external hoarding.

## 3.0 Painting

Internal hoarding will be mainly grey cambrink melamine on the public side and where painting is used, it must match the grey cambrink melamine. In the other side where plane chipboard or plasterboard is used and the area utilised as a temporal office, then the walls will be painted with white contractors PVA.

All external types hoarding will be painted, and all paint types must be as per specification unless changed by the ACSA-ORTIA Project Manager.

**Painting specifications**

For IBR/Corrugated sheeting paint spec: PLASCON WALL & WALL. TEAL RAL 5021.

The supporting posts are to be painted in PLASCON WALL & WALL. TEAL RAL 5021.

## 4.0 Corner Protectors

Internal hoarding to have aluminium corner protectors to match the height of the melamine chipboard panels used and the size to be 50 mm X 50 mm. External hoarding to have no corner protectors but the contractor to finish of the corners neatly i.e., with corner flashing to protect public from being injured.

## 5.0 Signage

All hoarding should have enough signage to inform the general public of the construction process.


A standard ACSA-ORTIA Buzzi Bee peel & stick signage, with an appropriate message approved by the ORTIA-Project Manager, must always be used on flat surfaces. For non-flat surfaces like corrugated/IBR sheeting the Buzzi Bee sticker should be mounted onto flat Perspex sheeting 1200 w X 1500 h surface and hung onto the hoarding. *(See Detail C)*

Advertising or other information may be fixed to the hoarding at ACSA's discretion in a snapper frame.

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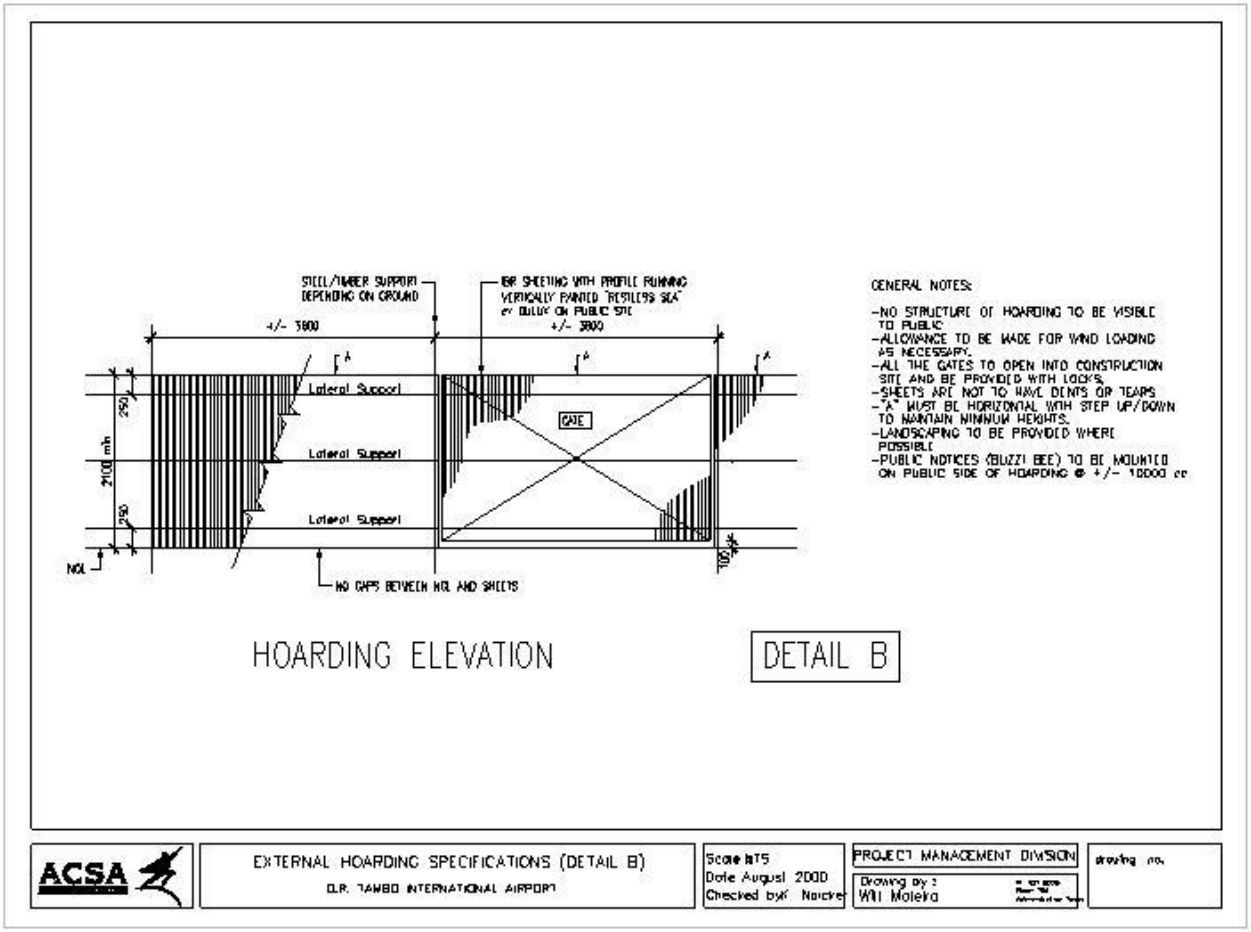
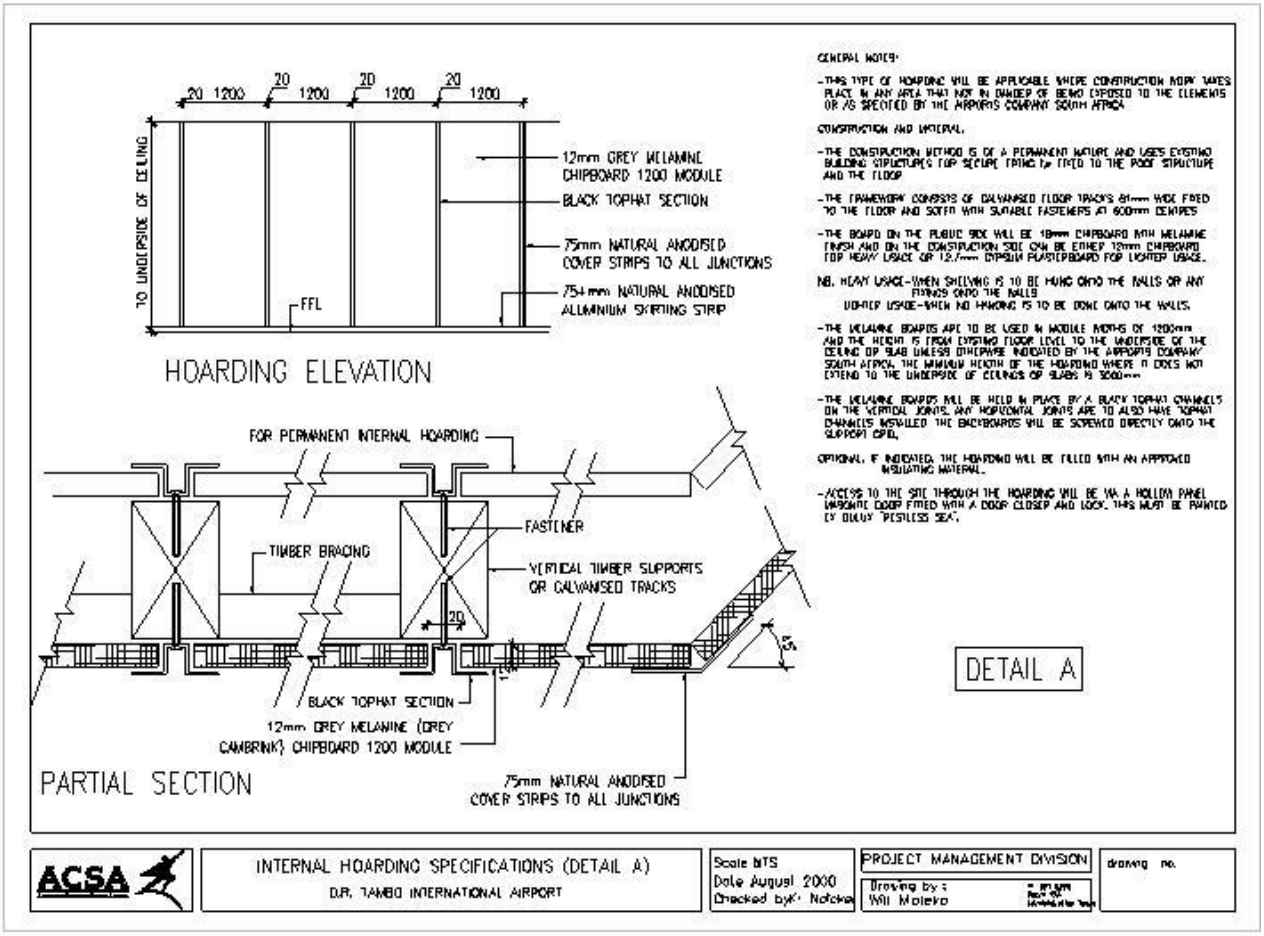
AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED

Project Management Division at O.R.T.I.A



AIRPORTS COMPANY SOUTH AFRICA SOC LIMITED



# C4.12 Contractors' Airside Safety Specifications

**INDEX**

**Introduction**

The airport precinct is generally divided into two, the landside (i.e., terminal buildings, car parks, the road system etc.) and the Airside (i.e., Apron, Runways, Taxiways and surrounding grounds.) Construction, maintenance, and repair work is carried out frequently on the airside, both by day and by night. Some of the work might be minor in nature lasting only a few hours or a few days, involving only a few workers with one or two vehicles/equipment. Some of the work might be major involving longer periods with a large staff complement and many vehicles and/or equipment. Whatever the work to be conducted, there are certain basic safety and operating standards that must be maintained. These specifications pertain to all work of a construction nature as defined in the Construction Regulations of 2014, as amended, and to general maintenance that is conducted on the airside.

Work done on or near an active airport is subject to several specific requirements and conditions to ensure the safe operation of the airport at all times. Since the work is to be carried out under airport operational conditions, various limitations and requirements are to be taken cognisance of during the preparation of the tender and the construction programme. These limitations will not entitle the contractor to claim for extension of time or standing time.

This document highlights hazards, limitations, and requirements for conducting work on the airside but it is not exhaustive as work processes and conditions differ depended on the nature of work. Other requirements will be highlighted as the work processes and conditions unfold and get better understood.

**1. Hazards on the airside**

The airport airside environment has very high inherent risks brought about mainly by aircraft operating at high speed and the high volume of fuel carried by aircraft. One might liken aircraft to mobile major hazard installations. The major hazards on the airside are: -

I. Moving aircraft
II. Combustible material
III. Aircraft noise
IV. Moving aircraft ground support equipment (GSE)
V. Pedestrians

Where a safety breach occurs, ACSA reserves the rights to stop work and/or withdraw the access and / or driving permits of the offenders. Work will only proceed when the safety breach has been resolved.

**2. Contractor's responsibilities**

The responsibilities of the contractor are as specified in the OHS ACT of 1993 as an employer and in the Construction Regulation of 2014 as a main Contractor or a sub-contractor as the case may be.

**3. ACSA's responsibilities**

The responsibilities of ACSA (the Airport Manager or his/her designated representative) as the client are as specified in the Construction Regulations of 2014.

The Airport Manager or his/her designated representative will issue the necessary application forms to those who apply to the airport management for an Airside Vehicle Permit and/or Airport Security Permit and will decide, on receipt of the completed forms, whether or not to issue permits. Permits shall be issued in terms of ACSA Policy and Procedures which are available on the ACSA website or from the ACSA Project Manager.

The Airport Manager or his/her designated representative may at any time withdraw or suspend an Airside Vehicle Operators Permit (AVOP) or an Airside Security Permit and is not obliged to give reasons for the withdrawal.

**4. Airside Induction Training and Airside Vehicle Operators Permit training.**

Before access to the Airside is permitted, the contractor and employees are required to attend Airside Safety Induction Training in accordance with ACSA Policy and Procedure no B 100001M.

Before driving on the Airside is permitted drivers are required to attend Airside Vehicle Operators Permit (AVOP) training in accordance with ACSA Policy and Procedure No B150001M.

The above training is at a fee which the contractor must verify with the Airside Safety Administrator, telephone 011 921 6635 or the ACSA Project Manager.

## 5. Control of personnel and vehicles

### 5.1. Coordination of activities on the airfield and aprons

The Airside has been divided into two, the airfield and the aprons. The airfield is all the areas consisting of runways, taxiways, and the grounds between and surrounding the runways and taxiways.

The Airside Operations Department is responsible for safe aircraft operations including obstacle limitation and safe aircraft ground handling, airside service delivery and the coordination of all activities on the airfield and on the aprons. It is imperative that the department knows of all activities that take place on the airside.

### 5.2. Notification to ATC, ARFF and Airside Safety and Compliance Department

Air Traffic Control (ATC) is responsible for the safe movement of all traffic (aircraft, vehicles, equipment, and personnel) on the runways, taxiways (includes aircraft stand taxi-lanes, apron taxiways and rapid exit taxiways) including the runway/taxiway safety areas. Instructions issued by ATC shall at all times be unconditionally complied with irrespective of any claims that may arise from it. Air traffic control services are provided by Air Traffic and Navigation Services (ATNS).

Aerodrome Rescue and Fire Fighting Department (ARFF) is responsible to ensure that safe runways and taxiways (includes aircraft stand taxi-lanes, apron taxiways and rapid exit taxiways) are available for aircraft use. ARFF is also responsible for the general safe house keeping of the airfield. In carrying out their responsibilities, ATC and ARFF constantly and continuously coordinate on activities that take place on the airfield (runways, taxiways, and surrounding grounds).

The Airside Safety and Compliance Department is responsible for safety enforcement and compliance with the **ACSA Airfield Standard Operating Procedures (ASOP)**. The ASOP govern the movement of aircraft, vehicles, equipment and pedestrians and all work conducted on the apron and the airfield. These procedures can be accessed on the ACSA website or through the ACSA project managers.

Because of the foregoing, it is imperative that ATNS know of all activities that take place on the runways, taxiways, aircraft stand taxi-lanes and the runway/taxiway safety areas (runway/taxiway strips). The ARFF Department, the Airside Operations Department and the Airside Safety and Compliance Department must know of all activities that take place on the aprons and the airfield. These departments and ATNS must be engaged from the early stages of planning the work and airside work safety plans (**Annexure 1** attached) should be developed with their involvement and submitted before the actual construction work commences. Information shall be submitted at the start of the construction work on the prescribed form (**Annexure 2** attached) and daily before work commences on the prescribed form (**Annexure 3** attached). **Annexure 3** is vital in instances of emergencies and low visibility operations (LVO) when the airfield/apron must be evacuated.

Personnel, vehicles, or equipment wishing to access runways, taxiways and the runway/taxiway safety areas shall be equipped with a two-way radio operating on the then current ATC ground frequency. Radio operators must be holders of a valid radio telephony licence issued in terms of the ACSA Policy and Procedure no C030 001 and C010 002. Where a person is not a holder of such licence such person shall be escorted by a holder of a licence. The escorted vehicle shall always follow behind the vehicle escorting.

Before entry onto a live runway or taxiway or a runway/taxiway safety area permission shall be requested from ATC, and one will only proceed after receipt of a clear approval to enter the runway or taxiway or the runway/taxiway safety area. When a request to vacate is received this shall be complied with immediately irrespective of any claims that may arise from it.

### 5.3. Access

#### I. Commencement of Work

Daily before work commences, the work site supervisor shall report to the ARFF Head of Department on duty if working on the airfield or to the Airside Safety and Compliance Senior Safety Officer on duty if working on the apron. Details of the work party shall be submitted on the prescribed form (**Annexure 3**). Before accessing the runways, taxiways and runway/taxiway safety areas clearance shall be obtained from ATC on the appropriate radio frequency.

A request from ATC, ARFF, Airside Safety and Compliance Department shall be complied with immediately irrespective of any claims that may arise from it.

#### II. Runways and Taxiways

Runways and Taxiways include the safety areas adjacent to the physical runways and taxiways, and these areas increase in dimension in bad weather conditions. When ATC declare LVO all working parties on the airfield should vacate the airfield and report to ARFF station for further instruction.

#### III. Bad Weather Conditions/LVO

In bad weather conditions no work shall be permitted on the airfield unless it is of an emergency nature i.e., it affects the safe operation of aircraft or the continued availability of the runways and taxiways. Note that bad weather conditions include low visibility and/or low cloud base. ATC shall make a determination and inform the ARFF Department. The ARFF Department shall ensure that all work on the Airfield stops, and all working parties vacate the airfield immediately irrespective of any claims that may arise from it.

#### IV. Emergency

Where an emergency situation develops, it might be requested that all work stops, equipment and personnel be evacuated from the Airside. Such request shall be complied with immediately irrespective of any claims that may arise from it.

### 5.4. Vacating Work Site

Daily before a worksite is vacated it shall be inspected for safety compliance. Before vacating the work site (at the end of a work period or at the end of the project) the contractor shall clean up and restore the site to an acceptable condition. If it is on the airfield ARFF shall be informed and if on the apron Airside Safety and Compliance shall be informed to conduct an inspection. The contractor shall not vacate the site until these inspections have been conducted and the site declared safe for operations. If further work is required to make the site safe, this work shall be conducted by the contractor irrespective of the delays that it may cause.

## 6. Restrictions

### 6.1 Hours of Work

Because construction work must be conducted with minimal disruption to airport operations time restrictions may be imposed that will determine the times that work can be conducted and the length of the work shift. These restrictions may require that work be conducted only at night.

### 6.2 Hot Works

No work or procedure that might be a source of fire shall be conducted without a valid hot work permit issued by the ACSA Aerodrome Rescue and Fire Fighting Department. This is in accordance with the ACSA Policy and Procedure no B07001. Hot work permits shall be returned to the fire station on expiry and new permits issued to continue work or for new jobs. No new permit will be issued before the return of the expired permit.

### 6.3 Temporary Hazards

The prime responsibility for determining hazards and the degree of tolerable risk rests with ACSA Safety and Compliance Department. All hazards shall be marked and lighted in accordance with the requirements of the International Civil Aviation Organisation (I.C.A.O.) Annexure 14.

The Contractor shall consult with ACSA to determine the necessary processes and procedures for the control of temporary hazards. The consultation shall be done in good lead time to allow for notification to airmen (NOTAM) and the Civil Aviation Authority (C.A.A.) where necessary.
*NB: Depending on the nature and duration of the work some notification processes require a lead time of three months.*

### 6.4 Pre-construction agreements

ACSA, Air Traffic and Navigation Services (ATNS) and the Contractor will meet and agree in advance before the start of the project on the following: -

I. Ingress and egress points for construction vehicles, equipment and personnel including routes to and from the work site and the marking of routes if necessary.
II. The means of control of construction vehicles and personnel so as to minimize interference with aircraft and ground support equipment operations.
III. The scheduling of construction activities to conform as much as possible to periods of minimum aircraft and ground support equipment operations activity. Because of this it might be required that the work is conducted at night.
IV. The disposal of excavated material, storage of construction materials and equipment, and the conditions of the work site at the end of the period of work.
V. The demarcation of the work area, signage, and lighting.

## 7. General

### 8.1 Radio Communication

The Contractor shall provide and maintain an acceptable radio communication system for all his construction vehicles and self-propelled plant moving outside the demarcated work area. This system must be approved by ATNS to prevent any interference with ATC equipment.

If working on runways, taxiways and runway/taxiway safety areas radio communication between ATC and the contractor shall be established for the duration of the Contract. The Contractor shall provide the radios and required number of units will be determined by the Airport Manager or his/her designated representative. The Contractor will be responsible for all maintenance costs and will not have any claim for the costs incurred in using longer haul routes or deviations because of a break in communication. If required, personnel of the Contractor will have to undergo a basic course in radio communications at the start of the Contract.

### 8.2 Radio Interference

All vehicles and plant used by the Contractor, his subcontractors or suppliers within the security area must be fitted with approved radio frequency suppressors. Any vehicle or plant found not to comply with this requirement will not be allowed on the airside.

### 8.3 Compliance with instructions

If the Contractor does not promptly comply with all instructions of the Airport Manager or his/her designated representative or Air Traffic Controller, ACSA has the right to amend the working schedule in aid of safety. ACSA has the right to suspend all works until the Contractor, in the opinion of the ACSA Safety and Compliance Department or ARFF Department, complies with the requirements irrespective of the delays that it may cause.

### 8.4 Movement on the Airport, Barriers, Lights and Markings

It is the responsibility of the Contractor to properly control the movement of personnel, vehicles and plant involved in the construction work. The Contractor shall erect, maintain, and remove all temporary barriers, warning lights and markings as required by the Airport Manager or his/her designated representative.

Working areas should be blocked off from the active parts of the aircraft movement areas and service roads by the erection of physical barriers. This is to warn pilots and GSE/vehicle operators and also to preclude construction work vehicles and personnel from inadvertently straying into operational areas. Barriers must be appropriately marked for day use and adequately lit at night (no danger tape and/or loose cones). Orange plastic cones (750mm high) may be used to demarcate work areas on the aprons. These shall be secured firmly in position to avoid being blown by wind and/or jet blast.

On service roads where work is in progress it shall be demarcated on the paved trafficked sides by using approved demarcation barriers (no danger tape and/or cones). On aircraft movement areas appropriately marked barriers and/or closure boards by day and red lights by night shall be used. Guidance on the marking of unserviceable areas and obstacles is contained in ICAO Annex 14, which can be requested from the project manager. The Contractor shall take special note of the fact that all temporary traffic-control facilities used must be suitably weighted and secured to withstand jet blast from passing aircraft.

### 8.5 Dust and Pollution Control

The Contractor shall limit dust pollution to the minimum as required by the Airport Manager or his/her designated representative. During windy conditions, ACSA may temporarily suspend all work where dust pollution creates unacceptable conditions until such time that conditions return to normal. The contractor may be required to implement dust management measures. In the case of working areas alongside the runways, taxiways, and aircraft parking bays it shall be a definite requirement that at all times, weekends and public holidays included, exposed areas are kept damp and free from dust and loose material which may be sucked into the engines of passing aircraft. The taxiways adjacent to the works shall be swept as necessary but at least once a day.

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

### 8.6 Storing of Vehicles, Plant and Materials

It is a requirement that, at the end of each work period/shift, all vehicles and plant are returned to the designated camp area allocated to the Contractor. With the approval of the Airside Operations Department, certain equipment may remain on or near the work area if the area is properly demarcated. Vehicles and plant must be safe guarded when not in use to avoid unauthorised use, which includes the safe keeping of ignition keys.

If material is temporarily stored outside the designated campsite areas, stockpiles shall be limited to a height 1,0m above natural ground level. No stockpiling will be allowed within runway and taxiway strips (safety areas).

### 8.7 Fires

No open fires whatsoever will be allowed on the airside of the airport. All necessary precautions must be taken to prevent veld or other unauthorized fires.

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

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

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

It might be requested that all work stops, equipment and personnel be evacuated from the Airside. Such request shall be complied with immediately irrespective of any claims that may arise from it.

### 8.8 Environment

The Airports Company South Africa (ACSA) recognizes the impact new developments and construction work have on the environment and embraces the obligations of corporate environmental responsibility to manage and minimize these impacts as far as possible.

Design consultants are required to explore and implement feasible opportunities to minimize environmental impacts imposed by new developments, specifically impacts relating to storm water, groundwater and soil pollution, air pollution, resource and raw material utilisation, depletion of nonrenewable resources, waste, energy and water conservation measures etc.

Should approval for new developments be required in terms of the Environmental Impact Assessment Regulations, consultants are required to comply with any design requirements included in the “Record of Decision.” Consultants are required to refer to ACSA’s policies and procedures document T050 010M and document T050 009M for more information.

Sustainable environmental principles that are in line with legislation, as well as ACSA’s environmental policies and procedures, must also be implemented during the construction phase of projects. Here consultants and contractors are required to consult ACSA’s procedure N050 005M *Construction Activities,* as amended. The fundamental steps emanating from these procedures are outlined as follows:

- Principal Contractor to appoint Environmental Control Officer (ECO)
- Principal Contractor to develop an Environmental Management Plan (EMP) and Environmental Method Statements (EMS) – these to be approved by ACSA’s ECO at least three days prior to commencement of works.
- Principal Contractor to establish an Environmental Monitoring Committee (EMC)
- PEMC to meet at least quarterly or once a month review environmental performance, incidents and make recommendations to the Principal Contractor
- ECO to audit construction site continuously against the EMP and the EMS
- ACSA ECO to audit construction site and compliance to the EMP and the EMS
- Construction environmental awareness training to be conducted prior to works commencing.

## 8. Conclusion

In line with the Service Level Agreements between ACSA and the Airlines, accredited Handling Agents and tenants, all contractors and projects must be monitored by the ACSA Accountable Manager to ensure that agreed standards are adhered to. In view of this, Airside Operations and Airside Safety and Compliance must be involved in all construction, maintenance and repair work planning and programming. ACSA Project Managers must take cognisance of ACSA Procedure D030 006M Construction During Operations.