CONTRACT No.	**(Insert at Contract Award)**
Contract between	**University of South Africa** **(Reg. No 930008988)**
And	**[Insert at contract award]** **(Reg No. _____)**
For	**Provision of Engineering Procurement and Construction (EPC)/Turn-Key Services for the Design, Supply, Installation, Programming, Commissioning and Maintenance of the Integrated Smart Building Management System at Durban (Upgrade)**

Contents:

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THE CONTRACT

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 provision of works as described in Part 1 of the Contract Data.

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

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

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions 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) …… …… Rand;

R…… (in figures)

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT does not apply as it is a cost reimbursable contract.

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

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

Signature(s)		
Name(s)		
Capacity		
For the tenderer:		
	(Insert name and address of organisation)	
Name & signature of witness		Date

Acceptance

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

The terms of the contract are contained in:

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

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

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

for the *Employer* .....

(Insert name and address of organisation)

Name & signature of witness .....

Date: .....

Schedule of Deviations

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

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

By the duly authorised representatives signing this agreement, the *Employer* and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from the draft contract, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the *Employer* during this process of offer and acceptance.

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

Part 1.2 Contract Data

The Conditions of Contract are the NEC3 Engineering and Construction Contract (Third edition with amendments issued up to and including April 2013) published by the Institution of Civil Engineers, copies of which may be obtained from Engineering Contract Strategies (telephone 011-803 3008). (Amendments made since the publication of the Third Edition of June 2005 may be downloaded from www.neccontract.com/products/contracts)

Each item of data given below is cross-referenced to the clause in the NEC3 Engineering and Construction 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

C: Target contract with activity schedule

dispute resolution Option **W1: Dispute resolution procedure**

and secondary Options

X1: Price adjustment for inflation

X2 Changes in the law

X7: Delay damages

X13: Performance Bond

X15: Limitation of *Contractor's* liability for design to reasonable skill and care

X16: Retention

X17: Low performance damages

X18: Limitation of liability

X20 : Key performance indicators

Z: *Additional conditions of contract*

of the NEC3 Engineering and Construction Contract as amended

10.1	The *Employer* is University of South Africa (UNISA) Address: Preller Street, Muckleneuk Campus, Muckleneuk Ridge, Pretoria Postal Address: PO Box 392, UNISA, 0003 Tel No. +27 (0) 12 429 3111
10.1	The *Project Manager* is: (Name): Address: Postal Address: Tel + e-mail:
10.1	The *Supervisor* is: (Name) TBD Address: Preller Street, Muckleneuk Campus, Muckleneuk Ridge, Pretoria Postal Address: PO Box 392, UNISA, 0003 Tel No.

e-mail:

14.2 The actions of the Supervisor relating to the notification of tests and inspections and their results (clause 40.2), the watching of tests (clause 40.3), the undertaking of tests and inspection before delivery (clause 40.5), the notification of the outcome of tests (clause 41.1), instructions to search for defects (clause 42.1) and the notification of defects (clause 42.2) are delegated as follows:

Element, component or aspect of the *works*	**Delegate**
Electrical installation	Name: TBC
Mechanical/HVAC installation	Name: TBC
Fire and Electronic installation	Name: TBC
Occupational Health and Safety	Name TBC

11.2(3) The *completion date* for the whole of the *works* is **2** months after the *starting date*.

11.2(9) The *key date*s and the *condition*s to be met are:

	***Condition* to be met**	***key date***
1	Approval of all Detailed Designs	TBD
2	Completion of the works	TBD

11.2(13) The *works* are Provision of Engineering Procurement and Construction (EPC)/Turnkey Service for the Design, Supply, Installation, Programming, Commissioning and Maintenance of the Integrated Smart Building Management Systems

11.2(14) The following matters will be included in the Risk Register

- **UNISA Turn-around times or processes and approvals**
- **Live Working Environment**
- **Standardisation**
- **Uncompact able Equipment**

11.2(15) The *boundaries of the site* are the **boundaries of the site are shown in the scope of work**

11.2(16) The Site Information is in Part 4: Site Information

11.2(19) The Works Information is in 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 1 week

2 The *Contractor's* main responsibilities

No data is required for this section of the *conditions of contract*.

3 Time

30.1 The *access date* is within two weeks of the starting date

31.1 The *Contractor* is to submit a first programme for acceptance within 1 week of the Contract Date.

31.2 The *starting date* is one (1) week after the date of appointment.

32.2 The *Contractor* submits revised programmes at intervals no longer than 2 weeks.

35.1 The *Employer* is not willing to take over the *works* before the Completion Date.

4 Testing and Defects

42.2	The *defects date* is 52 weeks after Completion of the whole of the *works*.
43.2	The *defect correction period* is 4 weeks

5	**Payment**
50.1	The *assessment interval* is monthly on or before the 25th day of each successive month.
51.1	The *currency of this contract* is the South African Rand.
51.4	The interest rate on late payment is the prime lending rate of the Employer's Bank.

6	**Compensation events**
60.1(13)	The place where weather is to be recorded is at the nearest South African Weather Bureau station to the Site. The *weather measurements* to be recorded for each calendar month are 1) the cumulative rainfall (mm) 2) the number of days with rainfall more than 10 mm 3) the number of days with minimum air temperature less than 0 degrees Celsius 4) the number of days with snow lying at 08:00 hours South African Time

7	**Title**
	No data is required for this section of the *conditions of contract*.

8	**Risks and insurance**
84.1	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the *works*, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract for any one event is R 5 million.
84.1	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract for any one event is R 5 million.
84.1	The *Contractor* provides these additional insurances. 1 Insurance against: Professional Indemnity Insurance for Professional team (Electrical, Electronic, Mechanical, OHS) Cover / indemnity: R 1 million. The deductibles are R0.00

9	**Termination**
	There is no Contract Data required for this section of the *conditions of contract*.

10	**Data for main Option clause**

C	**Target contract with activity schedule**
20.4	The *Contractor* prepares forecasts of Defined Cost for the *works* at intervals no longer than 2 weeks.
53	Deleted.

11	**Data for Option W1**
W1.1	The *Adjudicator* is the person selected by the Parties from the Panel of NEC Adjudicators set up by ICE-SA, a joint division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za),

W1.2(3)	The *adjudicator nominating body* is the Chairman of ICE-SA, a Joint Division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za).
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 Fifth Edition 2005 published by the Association of Arbitrators (Southern Africa The place where arbitration is to be held is Pretoria Gauteng Province The person or organisation who will choose an arbitrator • if the Parties cannot agree a choice or • if the *arbitration procedure* does not state who selects an arbitrator, is the Chairman of the Association of Arbitrators (Southern Africa)
12	**Data for secondary Option clauses**
X1	**Price adjustment for inflation**
X1.1(a)	The *base date* for indices is Start Date.
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are (only the following Indices will be considered by UNISA) 1. Professional Fees: Indices published in Table 1 for all expenditure groups (historical metropolitan areas) in Consumer Price Index (CPI) published by Statistics South Africa, applied to 85% of the rate escalated annually. 2. Construction Works: Contract Price Adjustment Provisions (CPAP) P0151.1 indices published by Statistics South Africa
X2	**Changes in the law** No data is required for this Option
X7	**Delay damages**
X7.1	Delay damages for Completion of the whole of the *works* are R 12 000.00 per day
X13	**Performance bond**
X13.1	The form of the performance bond is in the form set out in the document 1.3 Securities: Performance Bond
	The amount of the performance bond is 10% of the value of the contract.
X15	**Limitation of the *Contractor*'s liability for his design to reasonable skill & care** No data is required for this Option
X16	**Retention**
X16.1	The *retention free amount* is R0.00. The *retention percentage* is **10%**
X17	**Low performance damages**
X17.1	The amounts for low performance damages are:

Amount	**Performance level**
R 500 000.00	for Failure to ensure design efficiency for the project and site
R 500 000.00	for Failure to ensure cost efficiency for project resources
R 500 000.00	for Quality issues related to workmanship of contractor resulting in rework

X18	**Limitation of liability**
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is unlimited

X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is unlimited
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is unlimited
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is unlimited
X18.5	The *end of liability date* is 3 years after Completion of the whole of the *works*.
X20	**Key Performance Indicators (not used when Option X12 applies)**
	Deleted.
Z	***Additional conditions of contract***

The *additional conditions of contract* are:

Z1 **Tax invoices**

Add the following clauses to clause 51

The *Contractor*'s invoice.

51.5 The *Contractor* submits original valid tax invoices of the *Contractor* satisfying the requirements of the Works Information one week after receiving a payment certificate from the *Project Manager* in terms of clause 51.1.

51.6 Where the *Contractor* does not submit his valid tax certificate within the time required:

- the period within which payment is made in terms of clause 51.2 and
- the time allowed in clause 91.4

are extended by the length of time from the date when the *Contractor* should have submitted his valid tax invoice to the date when he does submit it.

Z2 **Selection and appointment of the *Adjudicator***

Add the following paragraph to clause W.1.2(1)

Within 2 weeks after declaring a dispute and if the *Adjudicator* was not yet appointed with a previous dispute, the notifying Party notifies the other Party of the names of two persons he has chosen from the Panel of NEC Adjudicators set up by ICE-SA, a joint division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za), whose availability to act as the *Adjudicator* the notifying Party has confirmed. The other Party selects one of the two persons chosen to be the *Adjudicator* within four days of receiving the notice, failing which the person chosen by the notifying Party will be the *Adjudicator* for the Contract. The Parties appoint the selected *Adjudicator* under the NEC3 Adjudicator's Contract (Third edition with amendments up to and including April 2013).

Z3 **Acts or omissions by mandatories**

In terms of Section 37(2) of the Occupational health and Safety Act of 1993 (Act 85 of 1993), the *Contractor* hereby agrees that the *Employer* is relieved of any and all of its liabilities in terms of Section 37(1) of this Act in respect of any acts or omissions of the *Contractor* and his employees to the extent permitted by this Act, and that this contract comprises the written agreement between the *Employer* and the *Contractor* contemplated in section 37(2).

Z4 **Transfer of rights**

The *Employer* owns the *Contractor's* rights over materials prepared by the *Contractor* for this contract, unless otherwise stated in the Works Information. The *Contractor* obtains other rights for the *Employer* as stated in the Works Information and obtains from a Subcontractor equivalent rights for the *Employer* over material prepared by the Subcontractor. The *Contractor* provides to the *Employer* the document which transfers these rights to the *Employer*.

Z5 **Schedule of Cost Component and Shorter Schedule of Cost Components**

Replace clause 5 **Manufacture and fabrication** in the Schedule of Cost Components with:

The following components of the cost of manufacture and fabrication of Plant and Materials which are:

- wholly or partly designed specifically for the *works* and
- manufactured or fabricated outside of the Working Areas.

51 Amounts paid by the *Contractor.*

Replace clause 6 Design in both the Schedule of Cost Components and Shorter Schedule of Cost Components with:

The following components of the cost of design of the *works* and Equipment done outside of the Working Areas.

61 Amounts paid by the *Contractor.*

Z6 **People and Working Area overheads**

The people and Working Area overheads percentages also include the cost of

- workman's compensation insurance for working at a height above 12m,
- site refreshments
- consumables e.g. nails, blades, drill bits, cleaning materials
- portable ladders
- personal safety equipment

Z7 **Retention**

Replace the last paragraph in X16.2 with the following:

The amount retained remains at this amount until the Defects Certificate has been issued for works other than the electrical and mechanical systems of the *works* identified in the Package Order. This amount is halved in the next assessment after the issuing of such Defects Certificate and remains the same until the Defects Certificate for the identified electrical and mechanical system has been issued. No amount is retained in the assessments made after the last Defects Certificate has been issued.

Z8 **People costs relating to the project director, contract manager, contracts director and cost controller**

The total costs in the Schedule of Cost Components relating to the, the project director, contract manager and cost controller in respect of clauses 11, 12 and 13 shall be:

a) deemed to be the sum stated in the first Activity Schedule prepared by the *Contractor;* and
b) paid in equal amounts in each payment made to the *Contractor*;

subject to this deemed amount being adjusted by the number of days or part thereof multiplied by the relevant daily rate provided in the Contract Data for work done in relation to a compensation event which cause the completion date to be changed in accordance with this contract.

Z9 **Performance Bond**

Delete "and in the form set out in the Works Information" in secondary Option clause X13.1 and replace with "is in the form set out in document 1.3 Securities".

Part C1.2 Contract Data

The *Contractor* is advised to read the NEC3 Engineering and Construction Contract (Third edition with amendments issued up to and including April 2013) and the relevant Guidance Notes and Flow Charts, published by the Institution of Civil Engineers, in order to understand the implications of this Data which is required. Copies of these documents may be obtained from Engineering Contract Strategies (telephone (27) 011 803 3008).

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

Part two - Data provided by the *Contractor*

10.1	The *Contractor* is (Name): Address Postal Address: Tel No. Fax No. Mobile No. Email
11.2(8)	The *direct fee percentage* is **. . .. .%** The *subcontracted fee percentage* is . . . . . **%**
11.2(18)	The *working areas* are the Site and
24.1	The *Contractor's* key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience: CV's are appended to Tender Schedule entitled .
11.2(3)	The *completion date* for the whole of the *works* is . . . .
11.2(14)	The following matters will be included in the Risk Register
11.2(19)	The Works Information for the *Contractor*'s design is in the document called Part C3: Scope of Work
31.1	The programme identified in the Contract Data is

C	Target contract with activity schedule
11.2(20)	The *activity schedule* is in Part C2.2: Activity Schedule
11.2(30)	The tendered total of the Prices is in Part C1.1 Form of Offer and Acceptance

	Data for Schedule of Cost Components		
23 in SCC	The listed items of Equipment purchased for work on this contract, with an on-cost charge, are:		
	Equipment	**Time related charge**	**Per time period** **Per** **Per** **per** **per**
24 in SCC	The rates of special Equipment are:		
	Equipment	**Size or capacity**	**Rate**
44 in SCC	The percentage for Working Areas overheads is **%**		
	Data for both schedules of cost components		
61 in SCC & SSCC	The hourly rates for Defined Cost of design outside the Working Areas are		
	Category of employee		**Hourly rate**
62 in SCC & SSCC	The percentage for design overheads is **%**		
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the *works* and Equipment done outside the Working Areas are		
	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is **%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by the Contractor's Plant Hire Association Full Rate Guide on their website www.cpha.co.za/rateguide.php The percentage for adjustment for Equipment in the published list is **%**		
22 in SSCC	The rates of other Equipment are:		
	Equipment	**Size or capacity**	**Rate**

X1 The variation in cost of special materials is:

Special material (describe including units of measurement e.g. steel reinforcing in tons.)	**Basis for variation** e.g. “Producer Price Index for selected materials” for ……...as published in the Statistical Release P0151 Table 4 of Statistics South Africa, or price for base month ex-factory, excluding transport, labour or any other costs.

Pro forma Performance Bond – Demand Guarantee

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Bond / Guarantee)

[*Insert Contractor's name and registered address]* Bank reference No.

Date:

Dear Sirs,

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

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

1.1	"Bank" means	***[Insert name of Bank, Branch (if applicable) and Registration Number]***
1.2	"Bank's Address" means	***[Insert physical address of Bank]***
1.3	"Contract" means	the written agreement relating to providing the *works*, entered into between the *Employer* and the *Contractor*, on or about the …... day of …. 20… ***(Insert Contract Reference No.)*** as amended, varied, restated, novated or substituted from time to time;
1.4	"*Contractor*" means	***(insert name of Contractor)***, a company registered in accordance with the laws of the Republic of South Africa under Registration No ***(insert registration number)***.
1.5	"*Employer*" means	***(insert name of Employer)***, a company registered in accordance with the laws of the Republic of South Africa under Registration Number ***(insert registration number)***
1.6	"Expiry Date" means	the earlier of • the date that the Bank receives a notice from the *Employer* stating that all amounts due from the *Contractor* as certified in terms of the contract have been received by the *Employer* and that the *Contractor* has fulfilled all his obligations under the Contract, or • the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by the *Employer*.
1.7	"Guaranteed Sum" means	the sum of R. . . . . (in figures) and ……...in words
1.8	"*works*" means	***[insert details from Contract Data part 1]***

2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer* as security for the proper performance by the *Contractor* of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
   - be signed on behalf of the *Employer* by a director of the *Employer*;
   - state the amount claimed ("the Demand Amount');
   - state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
   - is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
   - is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
   - shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and

- shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.

6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
   - shall expire on the Expiry Date until which time it is irrevocable;
   - is, save as provided for in 7 above, personal to the *Employer* and is neither negotiable nor transferable;
   - shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
   - shall be regarded as a liquid document for the purpose of obtaining a court order; and
   - shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa;
   - will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at ..... on this ..... day of ..... 20__

For and on behalf of the Bank

Bank Signatories(s)	.....	.....
Name(s) (printed)	.....	.....
Witness(s)	.....	.....
Bank's seal or stamp	.....	.....

2.1 Pricing assumptions

2.1 Pricing assumptions

2.1.1 General

2.1.1.1 The *Contractor* is paid under Option C (Target contract with activity schedule) for the *works.* He is paid on a monthly basis his cost as defined in the contract, less deductions for disallowed cost plus the Fee calculated in accordance with the contract using the data contained in Contract Data: Part 2 – Data provided by the *Contractor*. He is also, after the Completion of the whole of the *works*, paid his share, if any, of the "gain" or pays the *Employer* his share, if any, of the "pain", based on the difference between the total of Prices (lump sum prices for activities), adjusted in terms of the contract for compensation events, and his costs and the share percentages contained in the Contract Data: Part 1 – Data provided by the *Employer*.

2.1.1.2 Option C is a cost reimbursable form of contract where the Project Manager has to forecast what the Contractor will have paid with the two amounts due for payment being

- payments due to Subcontractors, uplifted by the *subcontracted fee percentage* plus
- the sum of the components in the Schedule of Cost Components for all other work which the *Contractor* does, uplifted by the *direct fee percentage*.

2.1.1.3 This is an "open book" assessment as the *Project Manager* has to inspect the *Contractor's* records as part of his assessment of amounts due to the *Contractor* i.e.

- accounts of payments of Defined Cost
- proof that payments have been made
- communications about and assessments of compensation events for Subcontractors
- other records as stated in the Work Information

2.1.1.4 The *Contractor* prepares forecasts of Defined Cost in consultation with the *Project Manager.* The forecasted amount at the next assessment is compared with the actual Defined Cost incurred and interest applied to the difference between these amounts is either paid to or deducted from the *Contractor*, as the case may be, in the next assessment.

2.1.2 Schedule of Cost Components

2.1.2.1 The Schedule of Cost Components (SCC) contained in the NEC3 ECC is used to:

a) define the cost components, which are included in an assessment of changed costs arising from a compensation event; and
b) define the cost components for which the *Contractor* will be directly reimbursed.

2.1.2.2 The Schedule of Cost Components (SCC) is based on the following:

a) People working within the Working Area i.e. those parts of the working areas which are necessary for Providing the Works.
b) Plant and Materials are items intended to be included in the works.
c) Equipment relates to items provided by the Contractor and used by him in the Working Area to Provide the Works and which the Works information does not require him to include in the works.
d) Charges include water and electricity and people overhead costs incurred within the Working Area.
e) Items not listed in the SCC are covered by the Fee.

2.1.2.3 The Site is the area within the boundaries of the site and the volume above and below it which are affected by work included in the contract. This area will comprise locations provided by the *Employer* for the *works.* The *Contractor* may establish

depots or use areas of land for the purposes of the contract which are distant from the Site, e.g., borrow pits or compounds, in which case he should describe such areas in the working area in the Contract Data: Part 2 – Data provided by the *Contractor* (see data associated with clause 11.2(18)). Cost for people, certain charges and Equipment in these areas will be included in the SCC. If no such areas are described, all work undertaken off site save for people costs relating to the contracts manager, contracts director and senior cost controller is covered by the Fee.

2.1.2.4 Defined Cost includes only amounts calculated using rates and percentages stated in the Contract Data and other amounts at open market rates or competitively tendered prices with deductions for all discounts, rebates and taxes.

2.1.2.5 Costs not included in Defined Cost are treated as being in the Fee. Examples of cost components not included in the SCC are:

a) head office charges and overheads save for those in the overhead percentages for design and manufacture and fabrication;
b) insurance premiums and corporation tax;
c) advertisement and recruiting costs; and
d) securities and guarantees required for the contract

2.1.2.6 *The Contractor's* profit is also excluded from the SCC and must therefore be included in the Fee.

2.1.2.7 The percentage for Working Areas overheads includes hand tools not powered by compressed air. Such tools shall include electrical angle grinders and discs, shot fixing guns and nails and drills and drill bits

2.1.4 Activity Schedule

2.1.4.1 General

2.1.4.1.1 An Activity Schedule is a list of activities which represents the activities expected to be performed in carrying out the *works*. The *Contractor* enters lump sum prices against each of these activities. The sum of these lump sums represents the target prices (the total of Prices) which the *Contractor* estimates he can do the work for. In Option C the Activity Schedule is only used as a means of arriving at the total of the Prices which becomes the 'target'. The target is adjusted by compensation events in order to keep an equitable share arrangement.

2.1.4.1.2 Information in the Activity Schedule is not Works Information or Site Information (see clause 20.1 and 54.1). An Activity Schedule is accordingly not an instruction to do work or how it is to be done. The Activity Schedule is only a means of arriving at the target and monitoring cost.

2.1.4.1.3 The *Employer* has developed a cost model to establish a control budget for the project. The Activity Schedule prepared by the *Contractor* is required to reflect the work breakdown structure contained in this cost model (see Table 1) and to retain the numbering system that is embodied therein.

2.1.4.1.4 The Activity Schedule shall be linked to the programme and have the following minimum information:

PROFESSIONAL FEES

Item No.	Activity description	Price excluding VAT
1.	Project initiation	
2.	Concept and approval	
3.	Design development	
4.	Construction Documentation & Procurement	
5.	Construction	

6.	Close-out	
7.	Disbursement	

CONSTRUCTION COST

Item No.	Activity description	Price excluding VAT
1.	Preliminaries and General	
2.	Hardware Components – Building Management System	
3.	Software Components – Building Management System	
4.	Points to be commissioned	
5.	Points to left for further/late connection	
6.	Allowance for equipment investigation and testing.	R 50 000.00
7.	Allowance for installation of control system/communication points	R 340 000.00
8.	Factory Testing Allowance	
9.	Allow for making good building work and finishes	
10.	Maintenance – 12 months	
11.	Training – 2 groups, and including refresher training	

SUMMARY OF COST

ITEM		AMOUNT
Professional Fees		
Construction Cost		
Contingency allowance @ 15%		
SUB-TOTAL	**R**	
ADD: VAT (@ 15%	**R**	
OFFERED TENDER AMOUNT	**R**	

2.1.4.1.5 As the *Contractor* has an obligation to correct Defects (core clause 43.1) and there is no compensation event for this unless the Defect was due to an *Employer's* risk, the lump sum Prices must also include for the correction of Defects.

2.1.4.1.6 If the *Contractor* has decided not to identify a particular activity, the cost to the *Contractor* of doing the work must be included in, or spread across, the other Prices in order to fulfil the obligation to complete the *works* for the tendered total of the Prices.

2.1.4.1.7 There is no adjustment to the lump sum activity schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Contractor* estimated at the time of tender. The only basis for a change to the Prices is as a result of a compensation event. (See Clause 60.1). Accordingly, the Prices tendered by the *Contractor* in the Activity Schedule are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk.

2.1.4.1.8 The *Contractor* does not have to allow in his Prices for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an *Employer's risk* event listed in core clause 80.1.

2.1.4.1.9 All prices for activities exclude VAT, while the total of Prices reflected in the Form of Offer and Acceptance includes VAT.

2.1.4.1.10 The *Employer* has made provision for price adjustment for inflation (see Contract Data).

Part 3: Scope of work

1. Introduction and Overview of the Project

The Integrated Smart Building Management Systems project through the installation a ISBMS systems comprising hardware such as servers, controllers, sensors, actuators, display and monitors etc; software and network protocols seeks to automate infrastructure, monitor systems, control systems, manage consumption and obtain reports.

UNISA council and Management initiated the process of developing a Smart Campus. The Smart Campus programme identified key focus areas and one of the areas is the Basic Services Management Capabilities which the Integrated Smart Building Management Systems project responds to.

The Integrated Smart Building Management System project will further respond to **Strategic Focus Area 2** for UNISA to be agile and embed an innovative, collaborative, efficient and sustainable institution. With **KPA 2.4** Achieve Brand Reputational range every time the survey is conducted that reflects UNISA as a high value and desirable HE brand by potential students, enrolled students, alumni, and employers. Additionally with **KPA 2.6** which notes that all UNISA's campuses should demonstrate comprehensive Smart Campus implementation as measured against variables such as: Being intuitive and simple to use; demonstrating design thinking; is student-centric; is modular, adaptive, flexible and intelligent and is adaptable and scalable.

Facilities Management (Maintenance) has been implementing Building Management Systems, however the current roll out is only focused on HVAC, Generator Sets, UPS's, Water and Energy consumption monitoring therefore, the system's full potential has not been realized and additionally accurate information on CO2 emissions for reporting to the Sustainability office is a challenge. This poses a risk of non-compliance by UNISA with the Carbon Tax Act No. 15 of 2019 which was postponed to an effective date of 31 December 2025.

The ISBMS is additionally part of the Smart Campus initiated by Council and Management where one of the pillars is energy efficiency though the Equipment Management Solution. This is further fulfilling the Sustainability Policy which commits UNISA to energy saving.

Further, Facilities Management (Maintenance) in its endeavours to improve maintenance by reducing response time in operations, enhancing maintenance by improving on proactive maintenance which will ensure comfort in buildings and increase productivity and efficiency saw the need to add to the current systems and add new systems which will control and monitor more equipment, the project will provide great assistance.

A feasibility study was undertaken by UNISA in 2023, and the outcome has confirmed that it is feasible to install ISBMS to meet the university's functional and strategic requirements. The University therefore seeks to upgrade and install new ISBMS system throughout Unisa owned buildings.

UNISA calls for a suitably qualified EPC/Turnkey Services for the Design, Supply, Installation, Programming, Commissioning and Maintenance of the Integrated Smart Building Management Systems. The prospective contractor must be strategically and efficiently capacitated with experienced experts in their respective professions. Only a service provider, entity or consortium that can provide all the required multidisciplinary skills and capacity, to constitute such a team may submit tenders.

The contractor should have in their organisation or consortium skilled design, construction, project management and related professionals and contractors in the built environment who can be mobilised immediately after appointment to meet the specific project lifecycle phases.

Scope of work

In Integrated Smart Building Management System (ISBMS) buildings conserve energy and create a responsive, comfortable, and productive indoor environment for users and occupants. As a crucial component of smart buildings, ISBMS should provide a wide range of functions and bring about the intended benefits upon successful deployment. This paper identifies salient SBMS attributes and explores key factors influencing building professionals' intention to use the system in commercial buildings

An Integrated Smart Building Management System (ISBMS) should:

- Provide intelligent & optimal start/stop of building systems
- Monitor and control building facilities
- Provide optimal equipment time scheduling
- Enable alarm settings and automatic notifications
- Support maintenance processes
- Enable disaster management and automatic recovery
- Ensure building safety
- Have an intelligent and interactive interface
- Adopt open communication protocols
- Be expandable for Internet of Things (IoTs)
- Enable trending and data analysis
- Enable building users to make adjustments
- Recording building functions and performance (data collection, trend analysis)
- Monitoring and controlling building's equipment
- Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building)
- Optimally controlling energy management (operational scheduling)
- Measuring, predicting and defining energy optimisation actions
- Provides alerting, diagnosing, trending and management reports

Note: The tenderer is to conduct their own due diligence research to ensure that all the requirements are met.

The proposal by tenderers should demonstrate that consideration to exploit should exploit the EPC strategy benefits, predominantly the scheduling/sequencing of the work in order to meet the timelines and all the standards required.
The successful bidder will be responsible for executing the works for the project by providing a full team of built-environment project management and related professional services as well as construction team to execute the project from start to completion.

The Contractor should have in their organisation skilled project management and related professionals in the built environment who can be mobilised as soon as they are an appointment letter is received to meet the specific project lifecycle phase to correspond with the needs that will arise at various stages of the project.

Part 4: Site Information

SITE DETAILS

Durban Regional Hub is located at 230 Stalwart Simelane St, Stamford Hill, Durban, 4025.

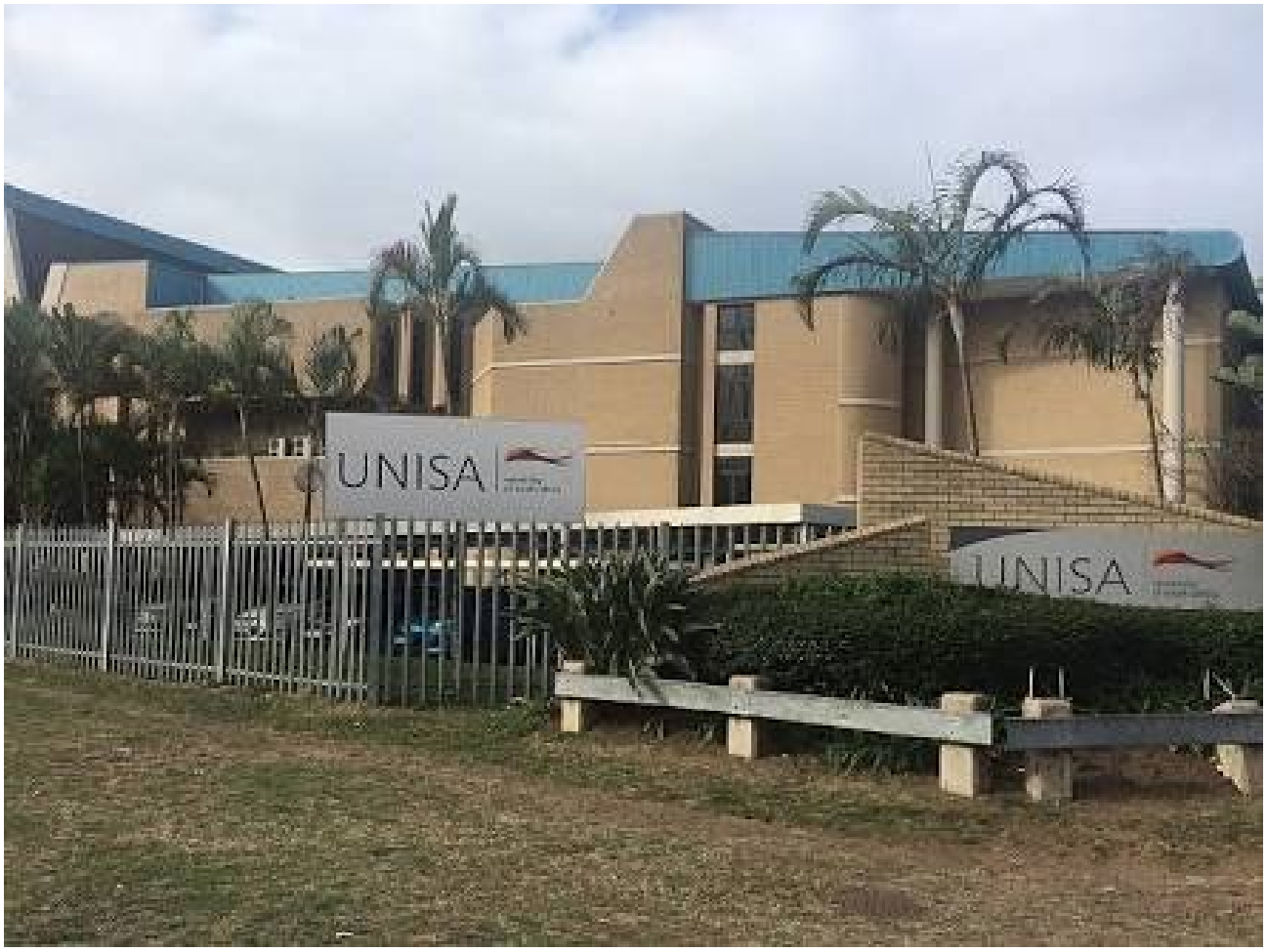

FIGURE 1: DURBAN REGIONAL HUB

ACCESS TO SITE
Durban Regional Hub is located at 230 Stalwart Simelane St, Stamford Hill, Durban, 4025

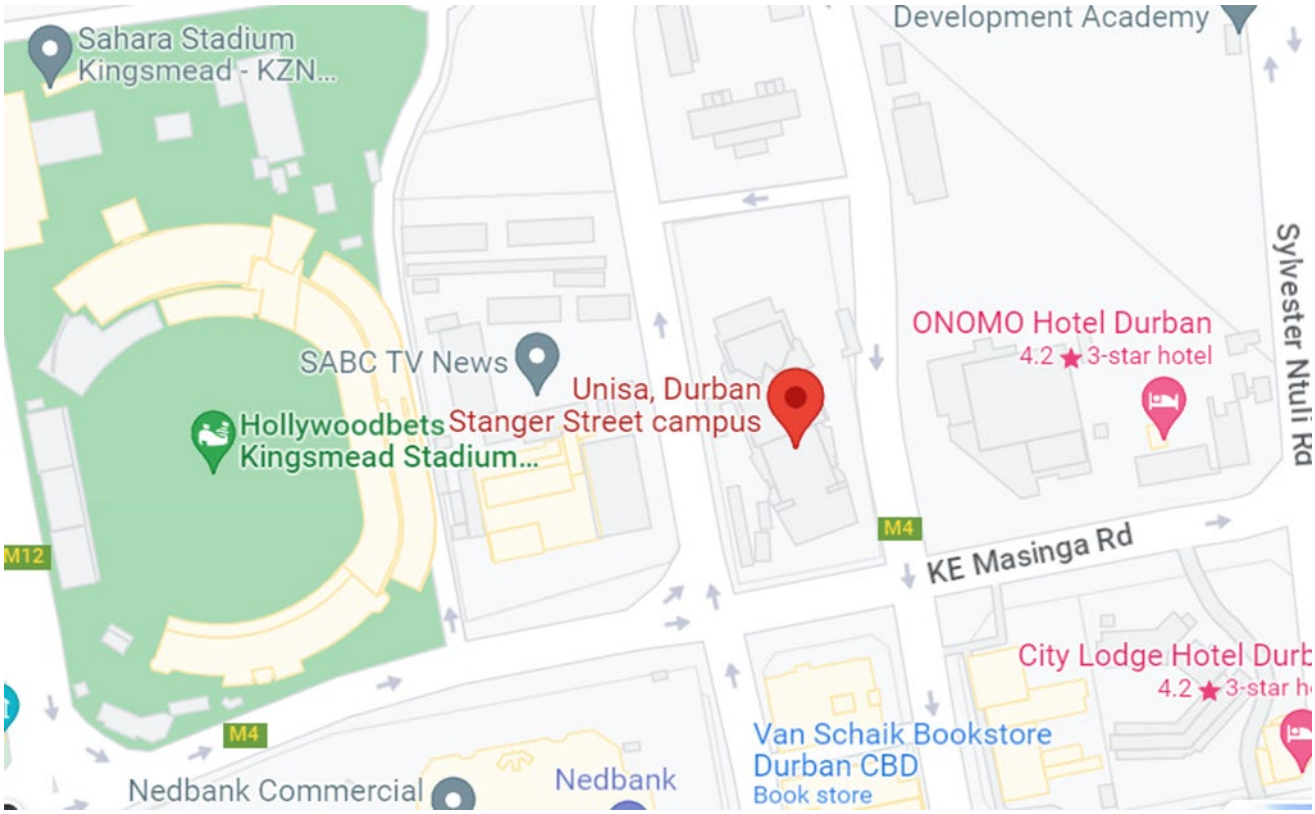

FIGURE 2: ARIEL VIEW OF DURBAN REGIONAL HUB (COURTESY OF GOOGLE MAPS)

1. SERVICES INFORMATION

LIBRARY

Project name:	ISBMS Unisa project	**Date:**	09 October 2023
Project Objectives:	Recording building functions and performance (data collection, trend analysis), Monitoring and controlling building's equipment, Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building), Optimally controlling energy management (operational scheduling), Measuring, predicting and defining energy optimisation actions Provides alerting, diagnosing, trending and management reports		

Item	Building Service	Item description	Installed Y/N	Functional Y/N	Suitable to intergration	Comments
1	Building Management System (BMS)	BMS	Y	Y	N/A	integration not fully completed SLA nor in place Backup and system recovery procedure not inplace not maitained or yearly testing procedure to verify if system is still functional
2	Electrical services	Generator	Y	Working	N	Client to upgraded to new controller [ONLY ONE GENERATOR ON SITE]
		SubDB thermal monitoring	N/A	Installation non-existence	N/A	Energy Meters to be installed to form part of the ISBMS project to ensure the smart campus project goal is achieved. Client to ensure that Energy Meters are compatible to BMS via Modbus
		Circuit Breaker monitoring			N/A	This can be monitored, client requested that this be only on the main breakers instead of all breakers.
3	Mechanical Services	HVAC system	Y	The system installed is CHW, SINCO units and mostly cassette units	N	retrofits of add-on solutions (serial cards)per unit(fan coil units within the spaces) to fit into the BMS slot on the pCO controllers , used to connect the controllers to the main BMS systems
		Fire detection Panel	Y	System is old, and require replacement	N	Unisa to ensure installation, this is a compliance issue per SANS 10400 part T, and latest detection, preferrably zyton system be installed for integration.
		Lift	Y	Not working at the time of inspection	Y	Firmware to be installed and supplier to expose points for monitoring
		Smart Water Meter	N		N	To be installed and monitoring can commence
4	ICT	Server room/ Control room	Y		N	Environmental control sensors to be installed for monitoring

OFFICES/ADMINISTRATION

Project name:	ISBMS Unisa project	Date:	09 October 2023
Project Objectives:	Recording building functions and performance (data collection, trend analysis), Monitoring and controlling building's equipment, Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building), Optimally controlling energy management (operational scheduling), Measuring, predicting and defining energy optimisation actions Provides alerting, diagnosing, trending and management reports		

Item	Building Service	Item description	Installed Y/N	Functional Y/N	Suitable to intergration	Comments
1	Building Management System (BMS)	BMS	Y	Y	N/A	integration not fully completed SLA nor in place Backup and system recovery procedure not inplace not maitained or yearly testing procedure to verify if system is still functional
2	Electrical services	Lighting Control	N	The smart meter functionality no longer functional	No	lighting contactors to be installed.
		Energy Meters	N/A	Installation non-existence	N/A	Energy Meters to be installed to form part of the ISBMS project to ensure the smart campus project goal is achieved. Client to ensure that Energy Meters are compatible to BMS via Modbus
		Solars	N/A	Part of the new installs to be brought forth by Unisa as part of the internal energy management strategy	N/A	Point under the ISBMS shall be provided for monitoring purposes. Client to ensure units are compatible to ISBMS.
		UPS	Y		Y	The current rack can be monitored using a rack monitoring unit which shall monitor Temperature, humidity as well as Power supply, and the same units point can be exposed to the ISBMS for monitoring
		Circuit Breaker monitoring			N/A	This can be monitored, client requested that this be only on the main breakers instead of all breakers
3	Mechanical Services	HVAC system	Y	The system installed is CHW, SINCO units and mostly cassette units	N	retrofits of add-on solutions (serial cards)per unit(fan coil units within the spaces) to fit into the BMS slot on the pCO controllers , used to connect the controllers to the main BMS systems
		Fire detection Panel	Y	System is old, and require replacement	N	Unisa to ensure installation, this is a compliance issue per SANS 10400 part T, and latest detection, preferrably zyton system be installed for integration.

LECTURE HALLS

Project name:	ISBMS Unisa project	Date:	09 October 2023
Project Objectives:	Recording building functions and performance (data collection, trend analysis), Monitoring and controlling building's equipment, Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building), Optimally controlling energy management (operational scheduling), Measuring, predicting and defining energy optimisation actions Provides alerting, diagnosing, trending and management reports		

Item	Building Service	Item description	Installed Y/N	Functional Y/N	Suitable to intergration	Comments
1	Building Management System (BMS)	BMS	Y	Y	N/A	integration not fully completed SLA nor in place Backup and system recovery procedure not inplace not maitained or yearly testing procedure to verify if system is still functional
2	Electrical services	Lighting Control	N	The smart meter functionality no longer functional	No	lighting contactors to be installed.
		Energy Meters	N/A	Installation non-existence	N/A	Energy Meters to be installed to form part of the ISBMS project to ensure the smart campus project goal is achieved. Client to ensure that Energy Meters are compatible to BMS via Modbus
		Solars	N/A	Part of the new installs to be brought forth by Unisa as part of the internal energy management strategy	N/A	Point under the ISBMS shall be provided for monitoring purposes. Client to ensure units are compatible to ISBMS.
		UPS	Y		Y	The current rack can be monitored using a rack monitoring unit which shall monitor Temperature, humidity as well as Power supply, and the same units point can be exposed to the ISBMS for monitoring
		Circuit Breaker monitoring			N/A	This can be monitored, client requested that this be only on the main breakers instead of all breakers
3	Mechanical Services	HVAC system	Y	AHUs - Yes, with issues on the sensors	Y	Replacement of sensors on the AHUs recommended as well as on the chiller suppy and return lines
		Fire detection Panel	Y	System is old, and require replacement	N	Unisa to ensure installation, this is a compliance issue per SANS 10400 part T, and latest detection, preferrably zyton system be installed for integration.

MECHANICAL PLANTROOMS

Project name:	ISBMS Unisa project	Date:	09 October 2023

Project Objectives:	Recording building functions and performance (data collection, trend analysis), Monitoring and controlling building's equipment, Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building), Optimally controlling energy management (operational scheduling), Measuring, predicting and defining energy optimisation actions Provides alerting, diagnosing, trending and management reports

Item	Building Service	Item description	Installed Y/N	Functional Y/N	Suitable to intergration	Comments
1	Building Management System (BMS)	BMS	Y	Y	N/A	integration not fully completed SLA nor in place Backup and system recovery procedure not inplace not maitained or yearly testing procedure to verify if system is still functional
2	Electrical services	Lighting Control	N	The smart meter functionality no longer functional	No	lighting contactors to be installed.
		Energy Meters	N/A	Installation non-existence	N/A	Energy Meters to be installed to form part of the ISBMS project to ensure the smart campus project goal is achieved. Client to ensure that Energy Meters are compatible to BMS via Modbus
		Solars	N/A	Part of the new installs to be brought forth by Unisa as part of the internal energy management strategy	N/A	Point under the ISBMS shall be provided for monitoring purposes. Client to ensure units are compatible to ISBMS.
		UPS	Y		Y	The current rack can be monitored using a rack monitoring unit which shall monitor Temperature, humidity as well as Power supply, and the same units point can be exposed to the ISBMS for monitoring
		Circuit Breaker monitoring			N/A	This can be monitored, client requested that this be only on the main breakers instead of all breakers
3	Mechanical Services	HVAC system	Y	Replacement of sensors required	N	chilled water line to have sensors replaced. The FAU AHUs to have new controllers for monitoring...
		Fire detection Panel	Y	System is old, and require replacement	N	Unisa to ensure installation, this is a compliance issue per SANS 10400 part T, and latest detection, preferrably zyton system be installed for integration.

LIBRARY BUILDING

Project name:	ISBMS Unisa project	Date:	09 October 2023
Project Objectives:	Recording building functions and performance (data collection, trend analysis), Monitoring and controlling building's equipment, Managing loads and enhancing efficiency (Reduce the energy needed to illuminate, heat, cool and ventilate a building), Optimally controlling energy management (operational scheduling), Measuring, predicting and defining energy optimisation actions Provides alerting, diagnosing, trending and management reports		

Item	Building Service	Item description	Installed Y/N	Functional Y/N	Suitable to intergration	Comments
1	Building Management System (BMS)	BMS	Y	Y	N/A	integration not fully completed SLA nor in place Backup and system recovery procedure not inplace not maitained or yearly testing procedure to verify if system is still functional
2	Electrical services	Transformer	N	The smart meter functionality no longer functional	No	lighting contactors to be installed.
		UPS	N	Unisa to install	Y	The current rack can be monitored using a rack monitoring unit which shall monitor Temperature, humidity as well as Power supply, and the same units point can be exposed to the ISBMS for monitoring
		Circuit Breaker monitoring			N/A	This can be monitored, client requested that this be only on the main breakers instead of all breakers
3	Mechanical Services	HVAC system	N			
		Fire detection Panel	N	required		Unisa to ensure installation, this is a compliance issue per SANS 10400 part T, and latest detection, preferrably zyton system be installed for integration.

2. EXISTING BUILDING MANAGEMENT SYSTEM (BMS)

The site has an existing BMS and requires an upgrade to an Integrated Smart Building Management System.