



TENDER DESCRIPTION:

APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA

BID NO: NRF/SARAO SHAO/40/2022-23

Closing date: Friday, 2 December 2022

NAME OF BIDDER: _____

CSD NUMBER: _____

GENERAL TENDER INFORMATION

TENDER ADVERTISED	:	APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA
COMPULSORY CLARIFICATION MEETING	:	<p>A compulsory clarification meeting will take place on Wednesday, 9 November 2022 at 10.00AM. To register in advance for the briefing session, click on the following link: https://ska.zoom.us/meeting/register/tJUqfuiprT0tEtT1r6DsCWL3njYKiOOrN50h</p> <p>After registering, bidders will receive a confirmation email containing information about joining the meeting</p> <p>A site visit will not be held, however should they wish to do so, bidders may schedule a site visit with SARAO before the bid closure date</p>
CLOSING DATE	:	Friday, 2 December 2022
CLOSING TIME	:	11:00 AM
SUBMISSION INSTRUCTIONS	:	<p><u>Electronic submissions</u> must be sent to tenders@sarao.ac.za</p> <p>Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Submissions should ideally be in searchable PDF format</p> <p>Attachments are limited to 25 MB per email</p>

BIDDER'S REPRESENTATIVE CONTACT INFORMATION:

NAME OF BIDDER:

CONTACT PERSON:

TELEPHONE NUMBER: CODE.....NUMBER.....

CELL PHONE NUMBER.....

E MAIL ADDRESS:

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY**BID NO: NRF/SARAO SHAO/40/2022-23****APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA**

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T1: Tendering Procedures

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

BID NO: NRF/SARAO SHAO/40/2022-23

APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA

BID NOTICE

INVITATION AND SCOPE OF WORK

Suitably experienced and qualified Contractors are invited to respond to this bid invitation for the South African Radio Astronomy Observatory (SARAO), a business unit of the National Research Foundation (NRF) -

Bid Number	Bid Description	Bid Closing Date and Time
NRF / SARAO SHAO/40/2022-23	APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA	Friday, 2 December 2022 at 11.00 AM

COMPULSORY CLARIFICATION MEETING

A virtual compulsory clarification meeting will take place on Wednesday, 9 November 2022 at 10.00AM. To register in advance for the briefing session, click on the following link:

<https://ska.zoom.us/join/9tJtUqfuiprT0tEtT1r6DsCWL3njYKiOOrN50h>

After registering, bidders will receive a confirmation email containing information about joining the meeting.

Persons attending the clarification meeting must be duly authorised to represent the bidder. Any bid submitted by a bidder not represented at the clarification meeting will be rejected.

PRE-QUALIFICATION CRITERIA IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT NO. 5, 2000 (PPPFA) WILL BE APPLIED AS FOLLOWS:

In terms of the Preferential Procurement Regulation 2017, pre-qualification criteria for preferential procurement as specified in Regulation 4 will apply as follows –

- (a) **Bidders must have a B- BBEE status level of between 1 and 4, failing which, will result in disqualification of a bid.**

PREFERENTIAL PROCUREMENT SYSTEM:

The 80/20 price and preference points system, as prescribed by the Preferential Procurement Regulations, 2017 issued under the Preferential Procurement Policy Framework Act, (Act No 5 of 2000) (PPPFA) will be applied to evaluate this bid.

EVALUATION CRITERIA:

Bidders must meet all the mandatory evaluation criteria (refer to Schedule B5). In addition, bidders must achieve the minimum score stipulated for each sub-criterion of the functionality criteria, and an overall minimum score of 75% for functionality (refer to Schedules B10-B13). Failure to achieve this minimum score shall result in a bid being held to be non-responsive and therefore disqualified

TENDER PUBLICATION:

The tender document will be available from 25 October 2022, and may be accessed on the following websites: www.sarao.ac.za/tenders and www.etenders.gov.za

TENDER SUBMISSION:

Electronic bid submissions must be sent to tenders@sarao.ac.za

Tenders must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions should ideally be in searchable PDF format.

Folders must be titled with the bidder's company name and folder title. Attachments are limited to 25 MB per email.

BID CONDITIONS:

SARAO does not bind itself to accept the lowest or any tender and reserves the right to accept any tender or portion of a tender.

BID ENQUIRIES:

No telephonic enquiries relating to this tender will be permitted. All enquiries regarding this tender must be in writing and directed to:

Technical Queries:

Ms Yanga Balfour, Project Manager
Email: ybalfour@sarao.ac.za

Procedural Queries:

Ms. Anwuli Okecha, SCM Specialist
Email: anwuli@sarao.ac.za

T1.1.1 LOCALITY PLAN

Not Applicable

T1.2 TENDER DATA

T1.2.1 Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in of Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za).

T1.2.2 Variations to the Standard Conditions of Tender

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender shall apply to this tender.

Clause No.	Variation, Amendment or Addition
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C.1	General
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C.1.1	Actions
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*Add the following to the end of **Clause C.1.1.1**:*

The Employer (interchangeably, "the Client") is the South African Radio Astronomy Observatory (SARAO), a business unit of the National Research Foundation (NRF), as represented by Yanga Balfour.

C.1.2	Tender Documents
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*Add the following to the end of **Clause C.1.2**:*

"The Tender Document for this Contract comprises the following:

Not issued to Tenderers, but available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering, the S.A. Bureau of Standards, the Government printers, the Construction Industry Development Board, and the Employer, as applicable:

1. The General Conditions of Contract for this project is the Fifth edition 2017 of FIDIC (International Federation of Consulting Engineers) **White Book, Client/Consultant of Model Services Agreement**.
2. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (June 2017).
3. The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).

C.2	Bidder's Obligations
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C.2.1	Eligibility
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C.2.1.3	<i>Add the following after the end of Clause C.2.1.2:</i>
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A. National Treasury Central Supplier Database Registration

Bidders must register on the National Treasury Central Supplier (CSD) Database and provide their CSD registration number where required in this bid document. Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture.

Bidders who wish to register as service providers on the CSD can register online at <https://secure.csd.gov.za/Account/Register>.

B. Attendance of Compulsory Virtual Clarification Meeting

Only Bidders who have attended the compulsory virtual clarification meeting and have form A2 "Clarification Meeting Certificate and Proof of Attendance" signed by the Employer's agent or his representative will be eligible to submit a tender offer.

C. Bidder's Tax Clearance Certificate

Bidders must be registered with the South African Revenue Services (SARS) and must submit/append documentary evidence/proof in the form of a CSD registration number and/or valid Tax Clearance PIN Number issued by SARS.

At the point of award of the tender, the recommended bidder must be in good standing with SARS, failing which the bidder must be in good standing within such extended period as may be granted at the discretion of SARAO, failing which the bidder will be disqualified from further consideration.

Each party to a Consortium/Joint Venture shall submit a separate CSD registration number and/or Tax Clearance PIN Number.

D. Further Compulsory Documents to be submitted with Tender

In addition to all the documents relating to A to E above and all other documents requested in Section T2.2 (Returnable Documents), it is further required that copies of the following current and valid company certificates be provided:

1. Letter of Good Standing from Compensation Commissioner (COID) or Compensation Insurer.
2. Letter of Good Standing from Department of Labour (UIF).

The above shall be provided for each JV Partner in the case of Joint Ventures.

E. Minimum Functionality Score to be Achieved

Any tender which scores less than the minimum threshold value stated in the functionality evaluation criteria, will be held to be non-responsive and disqualified.

C.2.7 Clarification Meeting

*Add the following to the end of **Clause C.2.7**:*

"The arrangements for a compulsory virtual clarification meeting as stated in the Tender Notice and Invitation to Tender.

Bidders should be represented by a person or persons who are suitably qualified and experienced to comprehend the aspects of the work involved."

C.2.13 Submitting a Tender Offer

C.2.13.2 Add the following to the end of **Clause C.2.13.2**:

"Bid submissions must be in electronic format.

Bid submissions shall comprise two separate electronic folders or subfolders as follows:

- **"Technical" (T¹) submission** (Technical submissions must be in searchable PDF format), and
- **"Financial" (F²) submission** (Folders must be titled with the bidder's company name and folder title. Attachments are limited to 25 MB per email)

Failure to comply with these requirements may result in the tender being deemed non-responsive."

C.2.13.3 *Delete the contents of Clause C.2.13.3 and replace with the following:*

“Only electronic bid submissions will be accepted. Electronic bid submissions must be sent to tenders@sarao.ac.za.”

C.2.13.4 *Add the following after the first sentence of **Clause C.2.13.4**:*

“The tender shall be signed by a person duly authorised to do so.”

C.2.13.5 *Delete the contents of **Clause C.2.13.5**.*

C.2.13.6 *Delete the contents of **Clause C.2.13.6** and replace with the following:*

“A two-envelope procedure as described in **Clause C.3.5** will be followed.

Bids must be submitted in two separate electronic folders, one with the Technical response (T1), and the second with the Financial response (F2). Each main folder may have sub-folders, and if this is the case, each sub-folder must be clearly indicated as such.”

C.2.13.7 *Delete the contents of **Clause C.2.13.7**.*

C.2.13.8 *Substitute the contents of **Clause C.2.13.8** with the following:*

“Accept that the employer will not assume any responsibility for any technical difficulties which might affect its bid submission being received on time.”

C.2.13.9 *Substitute the contents of **Clause C.2.13.9** with the following:*

“Only tender offers submitted in electronic format to tenders@sarao.ac.za will be accepted by the Employer.”

C.2.15 Closing Time

C.2.15.1 *Add the following to the end of **Clause C.2.15.1**:*

“The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.”

C.2.16 Tender Offer Validity

C.2.16.1 *Add the following to the end of **Clause C.2.16.1**:*

“The tender offer validity period is 90 days.”

C.2.16.2 *Add the following to the end of **Clause C.2.16.2**:*

“The maximum extension on the tender offer validity period is 90 days.”

C.2.17 Clarification of Tender Offer after Submission

*Add the following to the end of **Clause C.2.17**:*

“A tender may be rejected as non-responsive if the Bidder fails to provide any clarification requested by the Employer within such time as is granted by the Employer to provide such clarification. A tender may be rejected if the unit rates or lump sums for some of the items in the bills of quantities are, in the opinion of the Employer, unreasonable, and the Bidder fails, within such time as is granted by the Employer, to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged.”

C.2.23 Certificates

*Add the following to the end of **Clause C.2.23**:*

"Bidders are required to submit the following certificates with the tender as per requirements of **Clause C.2.13.2**:

A. Letter of Good Standing issued by the Compensation Commissioner (COLD) or Compensation Insurer.

B. Letter of Good Standing issued by the Department of Labour (UIF).

C.3 The Employer's Undertakings

C.3.1 Respond to Requests from the Bidder

C.3.1.1 *Substitute the contents of **Clause C.3.1.1** with the following:*

"The Employer will respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and circulate responses to all bidders who attended the compulsory tender briefing meeting."

C.3.5 Two-envelope System

C.3.5.1 *Substitute the contents of **Clause C.3.5.1** with the following:*

"Where it is stated in the Tender Data that a two-envelope process is to be followed, open only the technical proposal of valid bids for evaluation by the Employer's evaluation committee. Technical proposals will not be opened in the presence of bidders' representatives, however a list of bids received on the closing date will be published on the Employer's website within 7 days of the tender closing date."

C.3.5.2 *Delete the contents of **Clause C.3.5.2** and replace with the following:*

"Evaluate functionality of the technical proposals offered by bidders, and only open the financial proposals of bidders who score the minimum number of functionality points or higher.

Financial proposals will not be opened in the presence of bidders' representatives."

C.3.7 Grounds for rejection and disqualification

*Add the following to the end of **Clause C.3.7**:*

"Bidders will be disqualified if -

- (a) They do not meet the prequalification criteria of B-BBEE Level 1 and 4 status of contributor.
- (b) There is no evidence that they were represented at the compulsory bid clarification meeting and site visit.
- (c) Any of the Bidder's directors or shareholders are listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004, as a person prohibited from doing business in the public sector.
- (d) If, from information given in the completed Compulsory Enterprise Questionnaire or SBD forms, the Employer considers that there is a potential conflict of interest concerning the bidder which may potentially compromise the tender process.
- (e) They have been restricted from doing business with the Employer.
- (f) In a two-envelope system, the bidder fails to submit both a technical proposal and a financial proposal.

C.3.8 Test for Responsiveness

C.3.8.2 *Add the following to the end of **Clause C.3.8.2**:*

"Tenders will also be considered non-responsive if:

- (a) Subject to clause C.3.11.1.1 below, the Tender offer does not meet any one of the eligibility criteria indicated as mandatory in Part T2.

- (b) The Bidder has not fully and correctly completed the Offer portion of D2.1 Form of Offer and Acceptance i.e. the price has not been completed in words and numbers, the Bidder's details are not completed fully and correctly, and the Bidder has failed to sign the Offer portion of D2.1.
- (c) The Bidder fails to respond, within such time frame granted by the Employer, to any written request for clarification, and such failure renders it impossible for the Employer to clarify any ambiguities in the bid submission, and therefore renders it impossible to evaluate the bid submission any further.
- (d) There are any other material deficiencies in the bid submission which cannot be cured by clarification.

C.3.11 Evaluation of Tender Offers

C.3.11.1 General

Add the following clauses after **Clause C.3.11.1**:

C.3.11.2 The Evaluation Method

Subsequent to the Prequalification Assessment (refer to the Tender Notice & Invitation to Tender), bids will be evaluated in a three-stage process, as follows –

STAGE 1: Compliance with administrative requirements in Part T2 (namely, completion of Schedules A1-A7, the Standard Bidding Documents, and submission of the returnable documents in Schedules B1-B4). In this stage, discretion may be applied to allow bidders to complete and/or sign returnable schedules not completed and/or signed in the first instance or to submit returnable documents not submitted in the first instance, provided that such returnable schedules or documents are of a purely administrative nature and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid. Only compliant bids will proceed to Stage 2.

STAGE 2: Bids will be evaluated on the functionality criteria summarised in Clause C.3.11.2.2. Bids will first be evaluated against mandatory functionality criteria, and secondly on functionality criteria scored on a sliding scale. Only bids which –

- (i) meet all the mandatory criteria on capability;
- (ii) achieve the minimum score stipulated for each functionality sub-criterion; and
- (iii) score an overall minimum of 75 out of 100 points on functionality,

will proceed to Stage 3.

STAGE 3: Bids will be scored on the 80/20 price and preference points system.

Due diligence will be carried out on the recommended bidder, as such the bidder will be required to submit at least three client references from clients to whom similar services have been provided.

The lowest priced bid will not necessarily be accepted and the Employer reserves the right to accept the whole or part of any tender, or not to consider any tender at all.

The Employer reserves the right to conduct due diligence on shortlisted bidders' ability to undertake the project."

SARAO reserves the right to reject overpriced or under-priced bids outside the identified price range for the bid.

C.3.11.2.1 Assess Mandatory Functionality Criteria

Bidders' proposed project teams will be evaluated against the mandatory requirements in Schedule B5-B9:

Mandatory Functionality Criteria		
Criteria	Basis for Assessment	Returnable Schedules
Capability	Qualifications, Experience and Professional Registration of Design Teams	Schedules B5-B9
	Project Organisational Chart for Key Design Personnel	Qualification, Experience, Professional registration of

		design teams, and Project Organisational Chart
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C.3.11.2.2 Assess Functionality Criteria (scored criteria)

The Functionality sub-criteria and maximum score in respect of each of the sub-criteria are listed in the table below.

Functionality Sub-criteria	Minimum Points	Maximum Points (W2)	Schedule
Previous Experience and Track Record	30	40	Schedule B10, Page 47
Method Statement	30	40	Schedule B11, Page 49
Project Execution Plan	7.5	10	Schedule B12, Page 51
Quality management System	7.5	10	Schedule B13, Page 52
Total		100	

The total number of tender evaluation points for functionality will be the sum of the points scored for each of the sub-criteria. The points for each sub-criterion will be calculated using the following equation:

$$N_Q = W_2 \times \frac{S_0}{M_S}$$

Where:

N_Q = Bidder's functionality points (per sub-criteria)

W_2 = the maximum possible number of tender evaluation points awarded for the functionality as stated in the tender data

S_0 = the score for functionality allocated to the submission under consideration

M_S = the maximum possible score for functionality in respect of a submission

Functionality will be scored by not less than three evaluators. Each evaluator will assess each bid on the mandatory functionality criteria. With regard to the scored functionality criteria, the scores of all evaluators will be totalled and averaged to obtain the final score for Functionality.

The overall minimum score required for Functionality is 75 points out of a possible 100 (equivalent to 75%). Only those bidders who achieve the minimum scores for each functionality sub-criterion, and the overall minimum score of 75 points will be eligible to be evaluated further in Stage 3.

B-BBEE status level of contributor	Number of points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

C.3.17 Provide Copies of the Contracts

Add the following to the end of **Clause C.3.17**:

"The number of paper copies of the signed contract to be provided by the Employer is ONE."

T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

C.4.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)

Bidders are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the latest amended Construction Regulations (2014) issued in terms of Section 43 of the Act. Bidders are not required to submit a Health and Safety plan. However, The Bidder shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

C.4.2 Claims Arising after Submission of Tender

No claim arising out of any doubt or obscurity as to the true intent and meaning of anything contained in the Conditions of Contract, Scope of Work and Pricing Data, will be accepted by the Employer after the submission of any tender and the Bidder shall be deemed to have:

- (1) Read and fully understand the Conditions of Contract.
- (2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- (3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.
- (4) Requested the Employer to make clear the actual requirements of anything contained in this bid document, the exact meaning or interpretation of which is not clearly intelligible to the Bidder.

C.4.3 Imbalance in Tendered Rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high or not in proper balance with other rates or lump sums, the Bidder may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the Bidder to amend these rates and lump sums along the lines indicated by it.

The Bidder will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Price.

Should the Bidder fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

T2: Returnable Documents

Number	Heading	Pages
T2.1	Schedule of Returnable Documents	17
T2.2	Returnable Documents	19

T2.1 SCHEDULE OF RETURNABLE DOCUMENTS

T2.1.1. General

The Tender Document must be submitted as a whole. All schedules and forms must be properly completed as instructed, and the document shall not be taken apart or altered in any way whatsoever.

Bidders are required to complete each and every schedule and form listed below to the best of their ability, as the evaluation of tenders and the eventual contract will be based on the information provided by the Bidder.

Completion of the returnable schedules and submission of the returnable documents is mandatory. Failure to do so will result in a bid being held to be non-responsive, except in limited circumstances, namely, the Employer will allow bidders to complete returnable schedules not completed in the first instance or to submit returnable documents not submitted in the first instance where these are purely of an administrative nature (specifically, Schedules A1-A7, the Standard Bidding Documents, and Schedules B1-B5), and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid.

T2.1.2. List of Returnable Schedules, Forms and Certificates

SCHEDULE	DESCRIPTION	PAGE
Company Specific Schedules		
A1	Authority to Sign Documents	20
A2	Certificate of attendance at Virtual clarification meeting	21
A3	Certificate of Authority for Joint Ventures / Consortia	22
A4	Compulsory Enterprise Questionnaire	23
A5	Bidder's bank account details and financial references	24
A6	Certificate of Insurance Cover (Professional Indemnity)	25
A7	Form concerning the fulfilment of the Construction Regulations, 2014	26
Standard Bidding Documents (SBD) for Compliance Assessment		
SBD 4	Declaration of Interest	27
SBD 6.1	Preference Points Claim Form in terms of the Preferential Procurement Regulations 2017	29
Returnable Documents for Compliance Assessment		
B1	Tax Clearance	33
B2	Proof of registration on National Treasury Central Supplier Database	34
B3	BBBEE Certificate or Sworn Affidavit	35
B4	Schedule of Proposed Sub consultants	36
Returnable Documents for Functionality Assessment		
B5	Schedule of Key Design, Content Development and Construction Management Personnel	37
B6	Certified copies of Professional Qualification of Key Design, Content Development and Construction Management Personnel	42
B7	Certified copies of Professional Registration of Key Design, Content Development and Construction Management Personnel	43
B8	Curriculum Vitae of Key Design, Content Development and Construction Management Personnel	44

B9	Project Organisational Chart for Key Design, Content Development and Construction Management Personnel	46
B10	Bidding Entity past experience in delivering projects undertaken to the nature of the SARAO site and building requirements (lists of current and completed projects to be submitted). Must include all Consultants and Sub-consultants	47
B11	Method Statement based on the scope of work specific to this project	49
B12	Project Execution Plan (PEP) Specific to this Project	51
B13	Quality Management Plan Specific to the Project	52
Returnable Documents pertaining to the Contract		
B14	Amendments/ Alternatives and Qualifications by Bidder	53
B15	Record of Addenda to Tender Documents	54
B16	Joint Venture Agreement	55
D2.1	Form of Offer and Acceptance	76
D2.2	Contract Data	81
D3.1	Pricing Instructions	87
D3.2	Pricing Schedule	88

T2.2 RETURNABLE DOCUMENTS

NB: BIDDERS MUST COMPLETE THESE DOCUMENTS / FORMS IN BLACK TYPE OR BLACK INK

A1. AUTHORITY TO SIGN DOCUMENTS

I/We*, the undersigned, am/are* duly authorised to sign the form of tender on behalf of

by virtue of the Articles of Association/Resolution of the Board of Directors*, of which a copy is attached, or

*Delete whichever is inapplicable

1.	<div></div> <div>NAME</div>	<div></div> <div>SIGNATURE</div>	<div></div> <div>DATE</div>
----	-----------------------------	----------------------------------	-----------------------------

2.	<div></div> <div>NAME</div>	<div></div> <div>SIGNATURE</div>	<div></div> <div>DATE</div>
----	-----------------------------	----------------------------------	-----------------------------

WITNESSES:

1.	<div></div> <div>NAME</div>	<div></div> <div>SIGNATURE</div>	<div></div> <div>DATE</div>
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2.	<div></div> <div>NAME</div>	<div></div> <div>SIGNATURE</div>	<div></div> <div>DATE</div>
----	-----------------------------	----------------------------------	-----------------------------

A2. CERTIFICATE OF ATTENDANCE AT BID CLARIFICATION MEETING

This is to Certify that I/We*

of (Bidder)

of (address)

Telephone numberMobile number


E-mail

on (date)

have attended the clarification meeting and examined the Site of the Works and its surroundings for which I/we* am/are* submitting this Tender and have, so far as is practicable, familiarised myself/ourselves* with all information, risks, contingencies and other circumstances which may influence or affect my/our* tender.


****Delete whichever is inapplicable***

SIGNED BY/ON BEHALF OF BIDDER:


NAME


SIGNATURE

SIGNED ON BEHALF OF THE EMPLOYER:


NAME


SIGNATURE

A3. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES / CONSORTIA

This Returnable Schedule is to be completed only if the bidder is a joint venture or consortium.

We, the undersigned, are submitting this tender offer as a joint venture / consortium, and hereby authorise

Mr/Ms _____, authorised signatory of _____ company, close corporation or partnership, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :

Note:

A copy of the Joint Venture / Consortium Agreement showing clearly the percentage contribution of each partner to the Joint Venture / Consortium must be included in the bid submission.

A4. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture / consortium, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise

Section 2: VAT registration number, if any

Section 3: CIDB registration number, if any

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: The attached SBD 4 must be completed for each attender and be attached as a tender requirement

Section 7: The attached SBD 6.1 must be completed for each attender and be attached as a tender requirement

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- authorises the Employer to obtain a tax Clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

SIGNED:

ENTERPRISE NAME

DATE

NAME

POSITION

SIGNATURE

A5. BIDDER'S BANK ACCOUNT DETAILS AND FINANCIAL REFERENCES

Notes to Bidder:

1. The Bidder shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the credit rating that it, in addition to the information required below, accords to the bidder for the business envisaged by this tender. Failure to provide the required letter with the tender submission may render the Bidder's offer unresponsive.
2. The Bidder's banking details as they appear below shall be completed.
3. In the event that the bidder is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The bidder shall provide the following information:

(i)	Name of Account Holder:	
(ii)	Account Number:	
(iii)	Bank Name:	
(iv)	Branch Number:	
(v)	Bank and Branch Contact Details:	

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

A6. CERTIFICATE OF INSURANCE COVER (PROFESSIONAL INDEMNITY)

Note to Bidder:

In the event that the Bidder is a joint venture or consortium, the details of each partner must also be provided.

Professional Indemnity Insurance must be a minimum of double the contract value for this contract.

Bidders shall provide the following details of this insurance cover:

- (i) Name of Bidder:
- (ii) Period of Validity:
- (iii) Value of Insurance:

- Insurance for Works and Bidder's Equipment:

Company:

Value:

- Insurance for Bidder's Personnel:

Company:

Value:

- Motor Vehicles liability:

Company:

Value:

- Third Party liability:

Company:

Value:

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

A7. FORM CONCERNING THE FULFILLMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of regulation 4(3) of the Construction Regulations, 2014, as amended (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify:	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the team as specified in the Regulations (CVs to be attached):

4. Provide details of proposed training (if any) that will be undergone:

5. Potential key risks identified and measures for addressing risks:

I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

YES	
NO	

SIGNED BY/ON BEHALF OF BIDDER:

--

NAME

--

SIGNATURE

SBD 4 BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

- 1.1 Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.
Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDER'S DECLARATION

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES / NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in the table below –

Full Name	Identity Number	Name of State Institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person employed by the procuring entity? **YES / NO**

- 2.2.1 If so, furnish particulars

.....
.....

- 2.3 Does the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES / NO**

- 2.3.1 If so, furnish particulars

.....
.....

¹ The power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

3. DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect –

- 3.1 I have read and understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding;
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

CERTIFICATION

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 AND 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT MY BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Date

.....
Signature

.....
Position

.....
Name of bidder

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

The value of this bid is estimated to **exceed** R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable.

1.2 Points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contributor.

1.3 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

1.4 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;

- 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) “QSE” means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) “rand value” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

P_{\min} = Price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 6.1 B-BBEE Status Level of Contributor: . =(maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.)

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be subcontracted?

(Tick applicable box)

YES		NO	
-----	--	----	--

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES		NO	
-----	--	----	--

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One person business/sole propriety
- Close corporation
- Company
- (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

8.6 COMPANY CLASSIFICATION

- Manufacturer
- Supplier
- Professional service provider
- Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and

- 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
- (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES

.....

.....

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

.....

.....

B1. TAX CLEARANCE

Tenderers must be registered and in good standing with the South African Revenue Services (SARS), and as evidence of this, must append their CSD registration number and valid SARS Tax Clearance PIN Number to this Schedule (see Clause C.2.1.1 of T1.2.2: Variations to the Standard Conditions of Tender).

Bidders who are not registered with, or in good standing with SARS are not precluded from submitting bids, but must be registered and in good standing prior to Contract Award.

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance PIN Number and CSD Supplier Number.

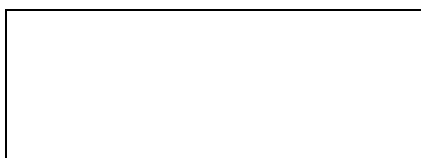


PIN NUMBER

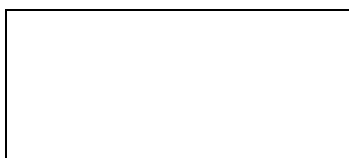


CSD SUPPLIER NUMBER

SIGNED BY/ON BEHALF OF BIDDER:



NAME



SIGNATURE



DATE

B2. PROOF OF REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE

Bidders shall be registered with the National Treasury Central Supplier Data Base (CSD) and must submit documentary evidence/proof in the form of a valid CSD Registration Number issued by National Treasury as per the requirements of Clause C.2.1.1 of T1.2.2: Variations to the Standard Conditions of Tender.

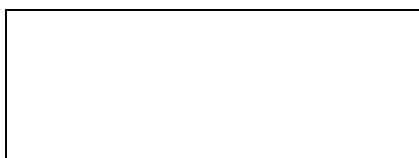
Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

Each party to a Consortium/Joint Venture must submit a separate CSD Registration Number.

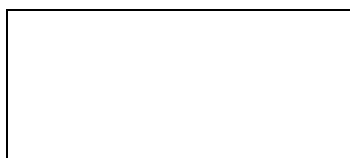


CSD REGISTRATION NUMBER

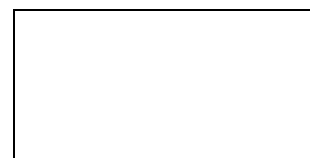
SIGNED BY/ON BEHALF OF BIDDER:



NAME



SIGNATURE



DATE

B3. B-BBEE CERTIFICATE OR SWORN AFFIDAVIT

In terms of Regulation 4(1)(a) of the Preferential Procurement Regulations (2017), pre-qualification criteria based on B-BBEE status level is applicable to this tender.

Bidders must have a B-BBEE status level of between 1 and 4, failing which their bid will be disqualified from further consideration.

Unincorporated joint ventures and consortia must submit a consolidated B-BBEE certificate.

In order to claim B-BBEE points, bidders must submit a Valid BBBEE certificate issued by a Verification Agency accredited by SANAS; or in the case of Exempted Micro Enterprises (EMEs), a sworn affidavit confirming annual total revenue and level of black ownership or a BBBEE certificate issued by the Companies and Intellectual Property Commission; and in the case of Qualifying Small Enterprises (QSEs), a sworn affidavit confirming annual total revenue and level of black ownership.

Bidders will not be awarded points for B-BBEE status level where they intend to sub-contract more than 25% of the value of the contract to any enterprise that does not qualify for at least the points that such Bidder qualifies for, unless the intended sub-contractor is an EME that has the capability an ability to execute the sub-contract.

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

DATE

B4. SCHEDULE OF PROPOSED SUBCONSULTANTS

We notify you that it is our intention to employ the following Sub consultants for work in this contract.

SUBCONSULTANTS			
Category/type	Sub consultant(s) Name/Address/Contact Person/Phone/e-mail/Details of Organisation/Firm/ Experience	Items of work (pay items) to be undertaken by the Sub consultant(s)	% sub-consult(s)

NB: If there is insufficient space above, the Tenderer may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder to this Schedule (If nil, enter NIL)

Acceptance of this tender shall not be construed as approval of all or any of the listed sub consultants. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a sub consultants not listed above being approved by the Engineer.

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

DATE

B5. SCHEDULE OF KEY PERSONNEL

The tender offer shall include an organogram clearly showing the team of key design and construction personnel the Bidder proposes to assign to the Contract and how responsibilities for the various disciplines or work and components of the Works will be assigned. The appointed bidder may not replace the key design and construction personnel proffered in this schedule without the prior written approval of the Employer.

In the case of a Joint Venture or where major sub-consultants are made use of, the organogram must show how respective responsibilities are to be allocated.

Phase 1: Service providers must meet the MANDATORY functionality requirements listed below. Service providers that fail to achieve a “GO” for each functionality requirement will not be considered for further evaluation.

The appointed bidder will be required to provide the additional personnel listed in the Scope of Work (Page 57) for the duration of the contract. The additional resources must meet the required level of experience and qualifications. The appointed bidder will be required to submit CV's of the additional resources for approval before execution of works.

Criteria	Sub criteria	Indicators		Weight (Mandatory / Optional)	Assessment (GO / NO GO)
Capability (Qualifications, Experience and Professional Registration of Design Teams)	Design Team (The design lead for the project must be clearly indicated.)	Architect (Lead) <i>Role includes Project Management duties.</i>	Degree or B-Tech in Architecture or in the Built Environment	Mandatory	
			A minimum of 10 years' experience in planning, designing and overseeing the construction of, museums and, or visitor centres, Heritage centres / restoration projects and or, commercial buildings with a value of at least R10m	Mandatory	
			Experience in project management of similar projects, where duties include conducting site meetings, drafting and submitting project management documents, recordal of meetings, issuing site instructions, variation orders, and ensuring integration of various built environments with specialist disciplines during the design & construction period	Mandatory	
			Post professional registration with SACAP (South African Council for the Architectural Profession)	Mandatory	
			Provide reference letters with a minimum of 3 contactable references	Mandatory	
		Quantity Surveyor	Quantity Surveying degree or related qualification in the Built Environment	Mandatory	
			7 years' experience from date of registration in preparing detailed bills of quantities in coordination with other built environment disciplines	Mandatory	

			and undertaking financial evaluation of bids to ensure correctness and compiling payment certificates		
			Professional registration with SACQSP (South African Council for the Quantity Surveying Profession)	Mandatory	
		Civil Engineer	Civil Engineering Diploma / Btech/ Degree	Mandatory	
			7 years' experience from date of registration in designing bulk civil infrastructure to sites which include water, sewerage, stormwater	Mandatory	
			Professional registration with ECSA (Engineering Council of South Africa)	Mandatory	
		Structural Engineer	National Diploma / B-Tech / B-Eng in Structural Engineering or related Built Environment field	Mandatory	
			7 years' experience from date of registration in designing concrete and steel structures and oversight during construction	Mandatory	
			Professional registration with ECSA (Engineering Council of South Africa)	Mandatory	
Capability (Qualifications, Experience of Exhibition Teams)	Exhibition Content Development Design Team (The content exhibition lead for the project must be clearly indicated.)	Exhibition Curator (Lead)	BSc / B-Tech / Degree specialising in Fine Arts Field	Mandatory	
			A minimum of 10 years' experience in the conceptualisation and management of the development, design and production of exhibitions and displays for museums and/or visitor centres.	Mandatory	
			Provide a portfolio of evidence of projects undertaken with a similar scope of work- conceptualisation and management of the development, design and production of exhibitions and displays for museums and/or visitor centres (i.e. Minimum of 3 exhibitions & content development contracts)	Mandatory	

			Provide a reference letters with minimum of 3 contactable references.	Mandatory	
	Construction Management Team	Project Manager (Lead)	An NQF level 7 qualification in any field.	Mandatory	
			A minimum of 10 years' experience in project management of similar construction projects, with a value of at least R10m, includes conducting site meetings, recordal of meetings, issuing site instructions, variation orders, completion certificates and ensuring integration of various built environments with specialist disciplines during design and construction	Mandatory	
			Registration with PMSA (Project Management South Africa), or PMP with PMI Institute, or SACPCMP The South African Council for the Project and Construction Management Professions) or Prince2 certification.	Optional	
		Construction Health & Safety Manager	National Diploma in Health & Safety or equivalent	Mandatory	
			7 years in drafting health and safety specifications, implementation plans and undertaking health, safety & environmental audits	Mandatory	
			Registration with South African Council for the Project and Construction Management Professions / SAIOSH	Mandatory	
		Construction Manager	Degree/B-tech in civil engineering or related built environment field e.g. property development	Mandatory	
			Minimum of 7 years' experience in similar Construction Manager role combined with Project Management experience for similar projects with a value of at least R5 million, and should be able to ensure integration of	Mandatory	

			various built environment with specialist disciplines during design and construction		
			Professional registration with ECSA and/or SACPCMP2	Mandatory	
	Project Organisational Chart for Key Design & Content Development	The organogram and supplementary documentation meets the requirements of this bid, showing the hierarchy of all the key design, exhibition content and development roles on the project team, and reporting lines and confirms the Bidder's capacity to undertake this project		Mandatory	
Proceed to Evaluation on Scored Functionality Criteria? (Yes/No)					

Table 1: Schedule of Key Personnel

Note: In addition to Table 1, Bidders must submit a Project Organisational Chart identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with SARAO

Key Design Personnel	Name	Qualifications	Registration Number	No of years' experience in terms of required skills	Company Name & Physical address and contact details of local office
Design & Construction Team:					
Architect					
Quantity Surveyor					
Civil Engineer					
Structural Engineer					
Exhibition Curator (Lead)					
Project manager					
Construction Health & Safety Manager					
Construction Manager					

B6. COPIES OF PROFESSIONAL QUALIFICATIONS OF KEY PERSONNEL

Copies of the professional qualifications of each Team Member listed in Schedule B6: Table 1, above, must be attached to this Schedule.

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

DATE

B7. COPIES OF PROFESSIONAL REGISTRATION OF KEY PERSONNEL

Copies of professional registration certificates of each individual Team Member listed in Schedule B6: Table 1, must be attached to this Schedule 1.

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

DATE

B8. CURRICULUM VITAE OF KEY PERSONNEL

CVs must be submitted in the required format.

Only include CVs for the required personnel as listed in the above table and in the format of the CV template provided in this schedule. Attach CVs in the order that the Key Design, Content Development & Construction Management Personnel are listed in Schedule B6.

Please note that if any changes are made to any personnel from the initial approved lists at the time of the tender award, written communication of all changes should be submitted to SARAO for approval to minimise any unforeseen risks.

Do NOT include CVs for support staff.

Please Note:

The Bidder should respond to the requirements listed in Table 1 and insert the details of the required personnel in the Schedule of Key Design, Content Development & Construction Management Personnel and attach the supporting documentation and sub-consulting agreements (where applicable);

The Bidder must clearly indicate in the Table where one person can fulfil various roles;

The names listed in Table 1 for the Key Design, Content Development & Construction Management Personnel will be those personnel that carry design responsibility, content development and construction management for the respective design engineering discipline;

Do not include support staff in the Schedule of Key Design Personnel. Only key personnel will be assessed. Support staff will therefore not be assessed. It is however the responsibility of the Bidder to ensure that the project is provided with adequate support capacity;

Where there are no names next to the suggested Key Design, Content Development & Construction Management Personnel, it will be assumed that the Bidder does not have the personnel included in the professional team;

In order to qualify, the team must include all the Key Personnel (or indicate where one person fulfils other roles) and each Team Member must meet the minimum requirements in relation to qualification, registration and number of years' experience as stated in Table 1.

The Key Design and construction management personnel must be registered with their respective related regulatory bodies and have recognised qualifications. Registration with Councils, for those professions where Councils exist, and with Associations or Institutes for those professions where only Associations and / or Institutes exist is required.

Curriculum Vitae Template of Key Design, Content Development & Construction Management Personnel Listed in Schedule

NAME OF COMPANY

- 1. Surname (and maiden name in brackets where applicable):**
- 2. First name/s:**
- 3. Date of birth:**
- 4. Nationality:**
- 5. Education and Specialist training:**

Qualification	Institution	Date Obtained

6. Membership of Professional Bodies:

Registration Number:

7. Key Qualifications relevant to this project:

8. Key skills and expertise relevant to this project:

9. High-level overview of professional experience directly related to the role of the team member in this project:

Date (From – To):	
Client:	
Location:	
Position in firm or project role:	
High-level description of duties or responsibilities in position or project team:	
Date (From – To):	
Client:	
Location:	
Position in firm or project role:	
Date (From – To):	
Client:	
Location:	
Position in firm or project role:	
High-level description of duties or responsibilities in position or project team:	
References:	
Name:	
Position:	
Tel:	
Email:	

B9. PROJECT ORGANISATIONAL CHART FOR KEY PERSONNEL

Bidders must append an organisational chart for the Key Design, Content Development & Construction Management Personnel to this Schedule.

B10. BIDDING ENTITY PAST EXPERIENCE IN DELIVERING PROJECTS UNDERTAKEN TO THE NATURE OF THE SARAO SITE AND BUILDING REQUIREMENTS OR SIMILAR PROJECTS

The minimum threshold for this schedule is 30 out of a possible 40 points allocated for delivering similar design contracts. Failure to achieve the minimum score for this section will result in disqualification.

Bidders must familiarise themselves with the evaluation criteria listed below and submit a list of current and completed projects and references to support the allocation of points.

Criteria	Indicators	Sub-criteria	Minimum Score	Scoring Allocation
Previous experience and Track Record	Past experience in delivering design projects undertaken to the nature of the CSE project	The bidding entity has <u>extensive</u> experience in designing and delivering diverse portfolio of building projects such as museums, exhibition centres, theatres, visitor centres, commercial buildings etc. (i.e. More than 3 design contracts with a value of at least R10 million)	30	40
		The bidding entity has <u>adequate</u> experience in designing and delivering diverse portfolio of building projects such as museums, exhibition centres, theatres, visitor centres, commercial buildings etc. (i.e. 2 design contracts with a value of at least R10 million)		30
		The bidding entity has <u>limited</u> experience in designing and delivering diverse portfolio of building projects such as museums, exhibition centres, theatres, visitor centres, commercial buildings etc. (i.e. 1 design contracts with a value of at least R10 million)		15
		The bidding entity has <u>no</u> experience in designing and delivering diverse portfolio of building projects such as museums, exhibition centres, theatres, visitor centres, commercial buildings.		0
			Sub-total	40 Points

Table 2: List of Previous and Completed Projects

NAME OF COMPANY			
PROJECT/EMPLOYER (Name, Tel. No and Fax No.)	NATURE OF WORK	VALUE OF WORK	YEAR OF COMPLETION

B11. METHOD STATEMENT BASED ON THE SCOPE OF WORK SPECIFIC TO THIS PROJECT

Bidders must familiarise themselves with the evaluation criteria listed below and submit a list of current and completed projects and references to support the allocation of points.

The minimum threshold for this schedule is 30 out of a possible 40 points for the Method statement.

Failure to achieve the minimum score for this section will result in disqualification.

Criteria	Indicators	Sub-criteria	Minimum Score	Scoring Allocation
Method Statement	The Building Design Works method statement must as a minimum address the following aspects: <ul style="list-style-type: none"> Detailed Plan to meet project outcomes & design time to completion; Resource Management Plan; Risk Management Plan; Detailed Design process and approvals; Environmental & Quality considerations throughout the design phase; Submission of the final designs, reports, including all supporting documents related to the CSE building requirements, 	The building design works method statement is specifically tailored to projects to the value of R 10m at minimum and details ways to improve the project outcomes and the quality of the outputs which address the specific project objectives and requirements. The approach is sufficiently flexible to accommodate changes that may occur during execution	30	20
		The building design works method statement is generic and not tailored to similar R 10m projects and does not address the specific project objectives and requirements. The approach does not adequately deal with the critical characteristics of the project		10
		The building design works method statement does not address the minimum objectives and requirements of the project and is of poor quality. It is unlikely to satisfy the project objectives or requirements as stated in previous fields		5
		The building design works method statement was not submitted.		0
	The exhibition content development method statement must as a minimum address the following aspects: A clear understanding of the aims and objectives of the intended visitor experience <ul style="list-style-type: none"> The engagement of key stakeholders in the development of the content The need for the content to appeal to 	The proposed Content Development methodology is specifically tailored to achieve the intended outcomes, namely, compelling content that will attract the widest range of potential visitors and deliver a unique educational and entertaining visitor experience		20
		The proposed Content Development methodology is likely to achieve only a limited number of the project outcomes, namely, compelling content that will attract the widest range of potential visitors and deliver a unique educational and entertaining visitor experience		10
		The proposed Content Development methodology is poorly conceived and will not achieve the intended project outcomes, namely, compelling content that will attract the widest range of potential visitors and deliver a unique educational and entertaining visitor experience		5

Criteria	Indicators	Sub-criteria	Minimum Score	Scoring Allocation
	the widest possible audience • The imperative to make the content accessible to all audiences • The imperative to deliver a holistic and integrated interactive experience for the visitors • The need for the content to have scientific and academic integrity	The Content Development methodology was not submitted.		0
Sub-total				40 Points

B12. PROJECT EXECUTION PLAN (PEP) SPECIFIC TO THIS PROJECT

Bidders must familiarise themselves with the evaluation criteria listed below and submit a list of current and completed projects and references to support the allocation of points.

The minimum threshold for this schedule is 7.5 out of a possible 10 points allocated for the Project Execution Plan. Failure to achieve the minimum score for this section will result in disqualification.

Criteria	Indicators	Sub-criteria	Minimum Score	Scoring Allocation
Project Execution Plan (PEP) specific to this project	Provide a detailed Project Execution Plan (PEP) for the duration of this contract for both building design and content development. The PEP must as a minimum address the following aspects: <ul style="list-style-type: none">Project Scope for building design and content development.A proposed Project Schedule which includes a list of activities for building design and content development. <i>(Including Appointment and Commencement of contract, Design Activities, Reviews and Approvals)</i>Sub-consultant's managementInformation & document managementCommunication and reporting	The Project Execution Plan addresses all the indicators in that it clearly defines how the contract will be successfully managed and leaves no doubt that the Bidder understands the requirements in terms of project management and proposes clear processes & procedures in terms of managing the schedule and project execution	7.5	10
		The Project Execution Plan addressed a minimum of 3 indicators that meet the requirements and SARAO is satisfied that the Bidder is capable of managing the execution of the contract		7.5
		The Project Execution Plan addresses one indicator and does not address all the requirements for this criterion to be deemed sufficient for the project		3
		The Project Execution Plan (PEP) is generic and does not meet any of the requirements		1
		The Project Execution Plan was not submitted		0
		Sub-total		

B13. QUALITY MANAGEMENT PLAN SPECIFIC TO THIS PROJECT

Bidders must familiarise themselves with the evaluation criteria listed below and submit a list of current and completed projects and references to support the allocation of points.

The minimum threshold for this schedule is 7.5 points out of a possible 10 points, specifically, a minimum of 1.5 points for existing socio-economic activities and a minimum of 6 points for skills transfer development plans. Failure to achieve the minimum score for this section will result in disqualification.

Criteria	Indicators	Sub-criteria	Minimum Score	Scoring Allocation
Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard	Quality Management System or Equivalent, based on the following principals -	Quality Management System or Equivalent exceeds the requirements where innovative options (through technology/options/processes) are considered to manage Quality during the design phase for both building design and content development	7.5	10
	<ul style="list-style-type: none">• Customer focus;• Leadership;• Involvement of people;• Process approach;• System approach;• Continual improvement;• Fact-based decision making, and• Mutually beneficial supplier	Quality Management System or Equivalent meets all the aspects and requirements of Quality Management principles for both building design and content development		7.5
		Quality Management System or Equivalent is generic and does not address Quality Management principles for both building design and content development		3
		The System was not submitted.		0
Sub-total			10 Points	

B14. AMENDMENTS/ ALTERNATIVES AND QUALIFICATIONS BY BIDDER

The schedules below are not an invitation for amendments, deviations or alternatives but should the Bidder desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder.

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(1) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

- (a) *Amendments to the General and Special Conditions of Contract are not acceptable;*
(b) *The Bidder must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

(2) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- (a) *Individual alternative items that do not justify an alternative tender and an alternative offer for time for completion should be listed here.*
(b) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.*
(c) *Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.*

(3) QUALIFICATIONS

ITEM ON WHICH QUALIFICATION IS MADE	DESCRIPTION OF QUALIFICATION

- (a) *The Bidder must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.*

If there is insufficient space above, the Bidder may append additional sheets.

Number of additional sheets appended by the Bidder to this Schedule

(If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

--

NAME

--

SIGNATURE

--

DATE

B15. RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

--

NAME

--

SIGNATURE

--

DATE

B16. JOINT VENTURE AGREEMENT

If the Tendering entity is a Joint Venture, a certified copy of the signed Joint Venture Agreement is to be included in the bid submission as per the requirements of Clause C.2.1.1 of the T1.2: Variations to the Standard Conditions of Tender.

SIGNED BY/ON BEHALF OF BIDDER:

NAME

SIGNATURE

DATE

D1: Scope of Works

Number	Heading	Pages
D1.1	Background to the National Research Foundation and the South African Radio Astronomy Observatory (SARAO)	57
D1.2	Scope of Works	58

D1.1 BACKGROUND TO THE NATIONAL RESEARCH FOUNDATION AND THE SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

The National Research Foundation (“NRF”) is a juristic person established in terms of section 2 of the National Research Foundation Act, Act 23 of 1998. The NRF supports and promotes research and human capital development through funding, the provision of National Research Facilities and science outreach platforms and programmes to the broader community in all fields of science and technology, including natural science, engineering, social science and humanities. The NRF is a Schedule 3A entity in terms of the Public Finance Management Act of 1999 (Act 1 of 1999 as amended by Act 29 of 2000).

The South African Radio Astronomy Observatory (SARAO), a facility of the National Research Foundation, is responsible for managing all radio astronomy initiatives and facilities in South Africa, including the MeerKAT Radio Telescope in the Karoo, and the Geodesy and VLBI activities at the HartRAO facility. SARAO also coordinates the African Very Long Baseline Interferometry Network (AVN) for the eight SKA partner countries in Africa, as well as South Africa’s contribution to the infrastructure and engineering planning for the Square Kilometre Array (SKA) Radio Telescope. To maximise the return on South Africa’s investment in radio astronomy, SARAO is managing programmes to create capacity in radio astronomy science and engineering research, and the technical capacity required to support site operations. In the reference documentation, SKA SA is understood to mean SARAO.

South Africa and its 8 African partner countries were jointly awarded the SKA together with Australia. The SKA will be Africa’s largest science project which will be a hub for both local and international collaboration. The SKA Organisation has been established with its headquarters at Jodrell Bank in Manchester, United Kingdom. The five key science projects that will be undertaken by the SKA include:

- Probing the Dark Ages
- Galaxy Evolution
- The Origin and Evolution of Cosmic Magnetism
- Strong Field Tests of Gravity using Pulsars and Black Holes
- The Cradle of Life.

The first phase of the SKA1-MID project includes the addition of 133 antennas to the 64-dish MeerKAT radio telescope and the second phase of the project and will include up to 2000 antennas distributed across South Africa and its eight African partner countries.

SARAO has offices based in Johannesburg and Cape Town, as well as the HartRAO facility at Hartebeesthoek and radio-quiet SKA host site in the Karoo, 90km from Carnarvon in the Northern Cape, which hosts the Square Kilometre Array mid-frequency telescopes, MeerKAT, and KAT-7 radio telescope installations, as well as a number of guest instruments, including the HERA telescope.

Further information about SARAO can be found on www.ska.ac.za and the international SKA on www.skatelescope.org.za

D1.2 SCOPE OF WORKS

OVERVIEW

SARAO has embarked on an initiative to establish an SKA Visitor Centre to be located in Carnarvon. The intention is for the Carnarvon Science Exploratorium (CSE) to showcase the KAT-7, MeerKAT and SKA projects, as well as other local attractions, and particularly those related to the natural and human history of the Carnarvon area and region. The exhibition content, through state-of-the-art interactive displays, will explain and demonstrate the difference between optical and radio telescopes, and provide an overview of the KAT-7, MeerKAT and SKA projects including guest instruments in the area. It is also intended for the CSE project to support and promote sustainable tourism growth and educational awareness in the Karoo Rural Node. Furthermore, the CSE should be structured and equipped to facilitate the conceptualization and generation of new content to respond to the changing needs of the visitors, and for the benefit of other science centres across the country and internationally. Importantly, the Centre should be a place where educational and outreach activities are hosted, and outreach content is developed, and as a base for mobile science education units that will service the Northern Cape Province.

VISION

The vision for the centre is that of a sustainable magnet visitor and tourist attraction in Carnarvon that will also benefit local and regional communities through enhanced science education and economic opportunities, while promoting the SKA.

The primary requirement for the achievement of the vision, and the sustainability and spread of the economic and social benefits thereof, is that the Centre must:

- Attract the optimum potential number of visitors and tourists, as well as members of the community. To attract the optimum number of visitors and tourists,
- It must offer an authentic, compelling, educational, and entertaining experience, which will appeal to the broadest potential audience, and importantly, and experience, knowledge and insights that they could not gain elsewhere.

THE SITE

A 4.5-hectare site has been allocated for the establishment of the proposed centre, at a strategic place at the entrance to the town of Carnarvon. The design and layout of the site must include:

- An indigenous botanical garden representing the rich and diverse Karoo flora
- A children's playground area with the playing apparatus could be themed on space exploration
- An outdoor amphitheatre for staging stargazing events and cultural festivals and performances.

Therefore, SARAO will require the services of a multi-disciplinary team led by an Architectural Consultant to (a) Provide Site Studies, (b) Detailed Designs (Building Works and Exhibit Content), (c) Development of Procurement Invitations to appoint a contractor and lastly, (d) Project management Services for the construction of the Carnarvon Science Exploratorium (CSE), as contemplated by the Architectural Profession Act, the National Building Regulations and Building Standards Act 103 of 1977 as amended and South African National Standards SANS 10 400 and other applicable statutory legislation.

LOCALITY

The site, known as Erf 431, is approximately 4.5 hectares in size. The site is located at the Western entrance to Carnarvon and is bounded by End Street and the town centre to the East, the R63 to the South, large open space with a small housing development to the West and Mark Street to the North as per Figure 2 below:



Key

1. Botanical /Indigenous Garden
2. Space-theme Play Park
3. Carnarvon SKA Visitor & Community Centre
4. Amphitheatre
5. Picnic Tables
6. Accommodation Facility

Figure 2: Proposed Site for the CSE – Erf 431, Carnarvon

D1.2.1. DESIGN PROCESS (168 DAYS)

The consultant shall perform the duties and obligations of the contract as the Client's Engineer. The consultant shall provide the following:

- Detailed design work and obtain approvals for the full design, drawings and detailed bills of quantities.
- Provide sufficient resources for the design phase, procurement phase and construction management services

SARAO will follow a System Engineering (SE) process to realise the design of the works. Based on the design requirements specification and supporting documentation issued by SARAO (refer to Annexure A, B, C, D) the Bidder is expected to prepare a detailed design for the stated scope of works including regulatory compliance and approval.

The SE process shall be managed internally within SARAO, with technical input and assistance from the successful Bidder as and when required. Bidders must also note that SARAO has specific configuration management for projects. All documentation, including drawings, shall be compiled on specific templates which shall be issued to the successful Bidder. There shall be a specific numbering system which shall be provided to the successful Bidder.

Bi-weekly progress meetings will be held between the design team and the SARAO team via video conferencing.

The Design Lead shall be responsible for keeping minutes for each meeting, including Requests for Information from SARAO. The design reviews and approval meetings shall be held via video conferencing.

SARAO shall deem each activity / phase as complete upon formal acceptance before the consultant commences to the next stage of works.

Programme timelines may be impacted by the land transfer and re-zoning process.

Additional Key Design resources

The service provider shall provide the below listed resources with required levels of experience and registration before execution of works. SARAO shall require CV's and proof of professional registration be submitted for approval.

Design Personnel			
Resource	Experience	Qualification	Registration
Mechanical Engineer (Mechanical services)	Mechanical Engineering Degree or B-tech (HVAC, lifts etc.) in the Built Environment	A minimum of 7 years' experience from date of registration in designing & commissioning HVAC	Professional registration with ECSA (Engineering Council of South Africa)

		systems (including CFD modelling for data centres) and other mechanical services like lifts	
MV Electrical Engineer / Power Engineer	B-Tech / B-Eng. Electrical Engineering	A minimum of 7 years' experience from date of registration in designing internal building electrical reticulation, designing bulk electrical supply to a site / building & facilitating access from Local Authority to connect bulk power supply. Provide oversight during construction.	Professional registration with ECSA (Engineering Council of South Africa) Valid licence issued by the department of labour - registration card and letter from the department required (Optional)
Building Wet Services / Fire Engineer	National Diploma in the Built Environment field	7 years' experience from date of registration in designing building wet services, fire detection & gas suppression services for typical data centre applications & oversight during construction	Professional registration with ECSA (Engineering Council of South Africa)
Heritage Practitioner	National Diploma / Degree in Social Sciences or related Built Environment field	7 years' experience in undertaking heritage surveys or/and impact assessments as an input to environmental & heritage related authorisations and oversight during construction	Registration with South African Council for the Architectural Profession (SACAP) or/and South African Institute of Architect (SAIA) or/and South African Institute for Heritage Science and Conservation (SAIHSC) or/ and Association of Professional Heritage Practitioners (APHP)
Archaeologist	National Diploma / BSc / BA Degree specialising in archaeology	5 years' experience in undertaking conservation related archaeological site surveys and investigations prior to and during construction	Not Applicable
Town-planner	Town-planning degree or related Built Environment field	5 years' experience from date of registration in undertaking town-planning schemes and rezoning applications	Registration with the South African Council for Planners (SACPLAN)
Geotechnical Engineer	Built Environment degree specialising in geology / geotechnical	5 years' experience from date of registration in undertaking geotechnical investigations and providing recommendations in structural civil / building design	Professional registration with ECSA (Engineering Council of South Africa)
Information Technology Engineer	IT degree or related field (local area networks, AV equipment etc.)	7 years' experience from date of registration in designing building internal local area networks (cabling, routing, WIFI, AV, Fibre	Professional registration with ECSA (Engineering Council of South Africa)

		reticulation) & oversight during construction	
Acoustic Engineer/ Specialist	Not Applicable	7 years' experience in undertaking acoustic designs for offices, museums, visitor centres and auditoriums	Not Applicable
Lighting Specialist	Not Applicable	Minimum of 7 years' experience in the design of lighting solutions for exhibitions and/or museums and/or visitor centres	Not Applicable
Exhibition Content Development Specialist/s	Relevant Degree / B- Tech / BSc specialising in Social Science/ Natural Sciences field	A minimum of 7 years' experience in the research and development of content for museum/ visitor centre exhibitions. Provide interpretation methodologies and programmes for museums/ visitor centres	Not Applicable
Exhibition Designer	National Diploma / Degree / BTech in the Fine Arts Field or related field	A minimum of 7 years' experience in the design and production of exhibitions and interactive displays. Provide lighting solutions for exhibitions and/or museums and/or visitor centres	Not Applicable
Education Specialist	An NQF level 7 qualification in any field.	Minimum of 7 years' experience in the conceptualisation and design of education material /interpretation methodologies and programmes for museums/ visitor centres	Not Applicable

High Level Programme for Completion

Time For Completion (916 Calendar Days)													
Building Design	Client Brief / Workshop	Preliminary Concept Design	Review comments from client & Update of Preliminary Concept Design	Concept Design	Review comments from client & Update of Concept Design	Detailed Design (Construction Readiness Drawings)			Review comments from client & Update of Detail Design	Submission to local Municipality For Approval	Preparation of Tender documentation for construction	Procurement	Construction Management Services (Test, Verification, Commissioning) & handover Phases (incl. Content Development Phase 6 & 7)
Exhibition &Content Development		Phase One: Development of a Conceptual Plan for the Displays & Exhibitions:		Phase Two: Development of a broad Narrative Outline for the Centre		Phase Three: Development of a Detailed Exhibition Narrative for the Centre	Phase Four: Initial Exhibition Curation & Design	Phase Five: Final Exhibition Curation & Design					
Days	14 Days	28 Days	14 Days	28 Days	21 Days	42 Days			21 Days	60 Days	14 Days	674 Days	

Figure 3: SARAO Project Execution Process

D1.2.2. CLIENT BRIEF / WORKSHOP

The design team led by the architect shall undertake a detailed review of the building requirements listed in the Annexures A, B, C & D for Carnarvon Science Exploratorium. A client brief / workshop shall be held seven (7) days after tender award as a kick off meeting and a Requirements Review (RR) to explain the design and content development requirements which maybe unclear / require further discussion and where requirements can be optimised or reduced.

Client Brief Interpretation Meeting:

Once the Requirements Review meeting has been held. The Consultant team led by the Architect shall be required to provide a presentation within seven (7) working days, of their understanding and interpretation of the client's brief / scope of work for the building design and exhibition and content development. The consultant led by the Architect shall be required to present a high level implementation plan of the scope of works (building & content development).

The client shall arrange for a panel to be present for the presentation.

Upon formal acceptance of the client brief interpretation presentation and high level implementation plan the design team led by the architect shall be expected to visit the site and familiarize themselves with the Kareeberg Municipal approval process. The design team shall be required to undertake Topographical and Geotechnical studies of the land (ERF 431).

SARAO requires fourteen (14) working days to review all documents received from the consultant.

All surveys, detailed design, drawings, detailed bill of quantities and all other ad hoc project management documents / reports shall be formally accepted by SARAO before commencement of the next project execution phase.

The design team shall be responsible for submitting a Notification of Intention to Develop / Build on behalf of SARAO and any other documentation in compliance with the Kareeberg Municipality prior to the commencement of the Concept Design Phase including completing the Engineers' appointment form and certificate in terms of SANS 10400).

The topographical survey will include establishing both vertical and horizontal ground control points, generation of the topographic maps and verification of ERF 431 site and its features both natural and artificial. The survey shall yield a Topographic Map for the ERF 431 site.

The survey shall, as a minimum include, but is not limited to the following:

- Determine boundary conditions (site property boundary, temporary and permanent servitude widths and rights-of-way-widths);
- Drawing provided at a scale of 1:500 and clearly define each contour at a 0.2m contour interval, identifying all even contours;
- Establish elevations. Spot elevations affecting the design and construction of the building shall be provided, such as ground
- Elevations, elevations on existing utilities, and all visible surface features within the area to be surveyed. Breakpoints or changes in grades or terrain shall be provided. Ground elevations shall be to the closest 0.01 m as well as all other elevations (paved roads, railroads, finished floors, utility lines, drainage structures, monitoring wells, etc.);

The bidder shall perform a field survey clearly showing all existing surface features within the project limits. Surface features shall include but not limited to:

- Tree type and trunk diameter, drainage channels (including invert and water surface elevations, water bodies (ditches, streams, creeks, rivers, ponds, etc.)) including invert and water surface elevations, structures, telephone boxes, fences, gates, and all other surface features. The size and type of all surface features shall be shown;
- Survey all existing facilities at the tie in point at ERF 431 e.g. road network, fence line, boundary walls, servitude, pathways, kerbing, gutters, services etc.; and
- Survey all underground features and utilities within the project limits. These include, but are not limited to, sanitary, stormwater, water, gas, electric, telephone, cable, fibre optic, traffic loops, other services manholes (including top and invert elevation), utility vaults (including top and invert elevation), valve boxes (water valves, sewer valves, gas valves, and all other valves, including top and invert elevations), storm inlets, cleanouts, water meters and aboveground piping and valves and surface drains and centerline elevations for above-ground piping and valves, septic systems, storage tanks, and all other underground features. The type, size, alignment, depth, and top and invert elevations of the underground features shall be noted.
- Slopes and flow lines shall be noted for existing sewer lines. Materials of construction of underground utilities shall be provided where available.

The geotechnical investigation shall as a minimum include the following (but not limited to):

- Confirm the soil types and underlying rock on the ERF 431 site;
- Identify the characteristics and properties of the underlying strata, through visual assessment, profiling and laboratory testing;
- Determine further investigation to be undertaken as part of the building design; and
- Compile an interpretative report on the findings of the investigation.
- The on-site activities shall include a field investigation which comprises of test pitting, in-situ profiling, rotary core drilling, sampling and visual assessment of the material, slope stability determination and visual assessment of ground water seepage.
- A total of ten (10) test pits shall be excavated using a light backhoe (TLB) or excavator shall be undertaken.
- The locations of the test pits and rotary core drilling positions shall be confirmed in consultation with SARAO. The test pits should be excavated either at the maximum depth of 5m, or to refusal. The sides of the pits shall be sloped or shored where required. The pit shall not be entered until it has been declared safe.
- Laboratory Tests are required on material recovered at each of the (10) locations and at every 1m depth interval or where there are changes in the profile horizon.

D1.2.3. PRELIMINARY CONCEPT DESIGN PHASE

Data from the field investigations (test pitting and laboratory testing) must be analysed and interpreted, and a report prepared wherein the following aspects will be provided as the minimum deliverables:

- General geology of the site;
- Test pit locations on a layout drawing;
- Discussion of the profiling and the visual assessments;
- Discussion of the laboratory testing;
- Geotechnical considerations that may have an influence on the proposed/ surrounding structures;
- Suitability of in situ material for use as engineered fill;
- Slope stabilities during excavation;
- Profile logging (test pit);
- In-situ soil improvement solutions;
- Elevation of the water table and dealing with groundwater;
- Lateral support solutions

- Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or
- Compacted soil and bedrock; provisions to mitigate the effects of expansive soils, differential settlement and varying soil
- Strength; and the effects of adjacent loads and;
- Expected total and differential settlement.

Profiling of test pits shall comply with "SANS 633-2007 – Profiling, percussion borehole and core logging in Southern Africa". Upon completion of the investigation, an Interpretative Report consisting of all deliverables will be submitted, firstly as a draft version for review, and thereafter as a final version for acceptance. Lastly, The surveys must be submitted in the following formats:

- AutoCAD drawings (DWG and DXF) showing all collected data in three dimensional coordinates along with the required pen setting files;
- Drawing files in PDF format;
- On the drawings submitted a title showing identification of property, such as lot number, block number, name, etc., city, country, province, name of surveyor, date of survey, and drawing number, if any;
- Small-scale vicinity map showing the general location of the property with relation to major streets and prominent landmarks in the area;
- All drawings submitted are to have a graphic bar scale and scale in words, a north arrow (showing true and grid north) and inclusion of a complete legend showing all symbols and abbreviations used is a standard requirement;
- XYZ coordinate points in ASCII and LAS file formats;
- Digital Terrain Model (DTM);
- A contour map in CAD and SHP file formats.

The tenderer shall be required to provide SARAO with Project Management Plans, Statement of Works, Scope Management Plan, Risk Management Plan, a Risk Register, Quality Management Plans, Health & Safety plans and a Project Schedule. These will be monitored and updated continuously throughout the project.

D1.2.4. CONCEPT DESIGN PHASE

The conceptual design will include the submission of the following documents/drawings to the SARAO three weeks prior to the Conceptual Design Review being held (CoDR). The full project scope for the site will be designed. The implementation and construction work packages will be reviewed and agreed by SARAO and may be amended, subject to good Project Management methodologies and funding constraints.

During the Concept Design Phase, the design team will be responsible for liaising with the Kareeberg Local Municipality to ensure that all design/building/application requirements are met as and when required.

The conceptual design for the building will include but not limited to:

Site Analysis which includes the following:

- Location
- The site masterplan
- Site constraints

Concept Design

- All building facilities to be designed i.e Hostel accommodations, Amphitheatre, playground etc
- Building concepts & principles
- Building zoning options (principles, concepts, zoning plan)
- Building look and feel (including proposed finishes options)
- Floor plans, Elevations, Sections, 3D models
- Solar study (External courtyards, natural sunlight etc.)
- Gardens
- Extended workplace (patios)
- Design ideas (Roof & access, facades, finishes)
- Site approach (existing conditions, proposed route)
- Landscape design summary (access road, parking, lighting, courtyards, gardens)
- Engineering Design

Structural & Civil Strategy & conceptual drawings

- Review of geotechnical conditions,
- Bulk civil, electrical, sewerage supply to the site,
- Foundation general arrangement including parking,
- Floor slab general arrangements,
- Roof plan general arrangement,
- 3D views,

- Existing access road with passing points and lighting,
- Drainage strategy,
- Footpaths & kerbs,
- Constraints

Building Services Strategy & conceptual drawings

- ICT & AV equipment
- Incoming Supplies to site
- Electricity
- Water
- Sewerage

Mechanical Service Systems

- Ventilation (active & passive, server room, toilets etc.)
- Domestic hot & cold water & drainage
- Cooling (active & passive cooling and server room cooling)
- Building Management System (including fire detection, gas suppression, CCTV, access control)

Electrical Service Systems

- LV distribution (single/redundant)
- Bulk power connection design work
- Lighting and controls
- Emergency lighting
- Back-up power supply
- Access & maintenance strategy

Sustainability Strategy (including renewable energy strategy/options)

The development aims to minimise energy consumption and reduce carbon emissions where possible. A Thermal / Energy Model should be produced by the Mechanical and Electrical teams to identify specific targets in relation to the following:

- The building designs must adhere to the Green Building Standards of South Africa;
- Energy Consumption & Performance Targets which will be established: kWh/m²/yr electrical / kWh/m²/yr fossil fuel.
- An absolute carbon emission target for the SARAO Building will be established: kgCO₂e/m². The model will be updated in line with the iterative design process.
- Low Carbon and Renewable Energy Technologies – feasibility analysis to determine the suitability of different low and zero carbon/renewable technologies. The appropriate technology for consideration must be documented for review. A report must be compiled which indicates how the building complies to different Green Building Star Statuses and what the cost implications will be between the different ratings. The following must be considered:
- Resource Consumption: Prioritisation of natural daylight and where possible, natural ventilation to improve the internal environment of the building/s and minimise reliance on fossil fuels. However, this can have inherent trade-offs in relation to issues such as thermal efficiency and noise attenuation. This must therefore be continually evaluated as part of the initial building thermal model to inform the design proposals.
- Water: The design should aim for a target of 40% reduction in water consumption if possible.
- Climate Change: The aim is for the design to enhance the building's internal environment through a strategy prioritising natural ventilation (where possible) and improving natural daylight. The initial building thermal model once complete will inform the project's initial energy and carbon reduction strategy. This will include a preliminary check of solar gains and potential overheating. The
- geohydrological assessment (flood risk) must address global climate change to ensure the building/s drainage is resilient to future climate change and does not adversely impact on flooding risk at the site.

Fire Strategy & drawings

- Means of Escape
- Fire Alarm & Sprinklers
- Fire-fighting
- External fire spread

Acoustic Strategy & drawings

- Environmental Noise Levels
- Acoustic Design strategy
- Facades & natural ventilation
- Roofing systems
- Partitions
- Doors
- Glazed screens

- Sound absorbing treatment
- Sound masking systems

Building User Requirements

Note: Requirements shall be reviewed and amended subject to Project Management methodologies and funding constraints.

ITEM	REQUIREMENT
SITE	
Signage	Street directional & branding signage
Parking	Tarmac for cars and buses
Security hut	Shelter for 2 persons
Entrance pathways	Paved areas
Outdoor Amphitheatre	Platform/stage area Raked stepped area for seating
Children's playground	Purpose-made space-themed apparatus
Full-size telescope disk	
Landscaping	
Indigenous botanical garden	Flower beds with indigenous trees/ plants interpretive signage foot pathways
Recreation spaces	Picnic tables Braai areas with tapped water
Entrance	
Reception area / Ticket sales	Counter Pamphlet rack
Service Areas	
Admin front office	Storage cabinets Computer/s & printer
Staff kitchen /scullery	Counter stove microwave fridge table chairs
Cleaning equipment & materials storeroom	Steel cabinets & shelves
Locker room	Lockers /cubicles /shelves
IT server/ equipment	Computer server WIFI modem
Visitor Hospitality	
Café/ Gift Shop)	

Outdoor courtyard	
Female toilets	Toilets / basins / blow driers
Male toilets	Toilets / urinals / basins / blow hand driers
Disabled toilet	Toilet / basins / blow hand drier
Learners	
Activity / workshop/ lecture space	desks / chairs / whiteboard / cupboards / shelves
Toilets	
Community	
Multi-purpose space: resource & computer centre – meetings /workshops /performance space	Tables / chairs / cupboards / shelves
(access to learner toilets)	
General Use	
Multi-purpose space: resource & computer centre – meetings /workshops /performance	Removable stage /podium / projection screen / removable chairs / sound system / projector/s
Courtyards	Outdoor tables & chairs/ umbrella's
Access to toilets	
Offices	
Manager	Desk/ chairs/ cupboards / shelves/ computer / wall safe
Secretary	Desk/ chairs/ cupboards / shelves/ computer / printer
Financial Administrator	Desk/ chairs/ cupboards / shelves/ computer / printer
Education /Visitor Manager	Desk/ chairs/ cupboards / shelves/ computer
Stakeholder Manager	Desk/ chairs/ cupboards / shelves/ computer
Office/s for guides	Desk/ chairs/ cupboards / shelves/ computers
Mobile Science Education Unit	
Double garage for two mobile units	TBC
Lockable storage space for teaching apparatus/ materials	
The <u>Exploration of Space Gallery</u> :	
History of space exploration/astronomy (earliest times to the present)	Graphic panels / AV screens / plinths for artefact displays

Knowledge, science, and technology developed through space exploration	Graphic panels / AV screens / plinths for artefact displays
The (hi)story of astronomy in South Africa	Graphic panels / AV screens / plinths for artefact displays
The story of SKA	Graphic panels / AV screens / plinths for artefact displays
The science of astronomy & SKA (interactive displays)	Graphic panels / AV screens / interactive AV apparatus / plinths for artefact displays
Astro-Tourism Route	Graphic panels / AV screens
The !Xam Cosmos / Lloyd & Bleek Archive, etc.	Graphic panels / AV screens
<u>Exploration of Place (Carnarvon & The Karoo) Gallery</u>	
The Karoo: people, archaeology, and paleontology	Graphic panels / AV screens / plinths & cases for artefact displays
Carnarvon: Earliest inhabitants and settlement: !Xam, Dutch/ English / Missionaries, Xhosa, etc	Graphic panels / AV screens / plinths & cases for artefact displays
<u>Models / Artefacts</u>	
Full size telescope	
Model of telescope	
<u>Planetarium</u>	
Projection space with seating	Removable seats
Projection room	Counter / chairs / lockable storage
Office for Planetarium Operator/ Manager	Desk / chairs / lockable storage
Toilets	
Stargazing platform (outdoor amphitheater)	Optical Telescope Lockable shelter for telescope
<u>Hostel Accommodation</u>	
Sleeping areas	
Kitchen	
Dining hall	
Ablution facilities	

Key Design Principles

The conceptualisation, design, and construction of the building, as well as the site more generally, should be informed by the following key principles:

- The Centre site and building must be maximally accessible
- The site and the building should be integrated within the urban fabric of Carnarvon and not be separated from the community by high fencing or walling. Rather, the current character and use of the site as a space where community members traverse when walking from their homes to the centre of town, or to visit family and neighbours, should be retained. Also, within and outside the building, the navigation of the spaces should be designed so as to enable meaningful interaction and engagement between the members of the Carnarvon community and visitors to the Centre.
- The universally accepted design principle of form follows function must underpin the design of the Visitor Centre building. The primary design imperative is to create a building that accommodates, complements and enhances the visitor experience and activities that will take place there.
- The building design must also express an organic and tangible relationship with the environment and landscape in which it is situated. Visitors should “experience” the building in the same way as they experience the exhibitions, displays and presentations within the Centre.
- The design of the building, as well as the layout of the site on which it is located, should be informed and inspired by the character of the Karoo landscape as well as the scale and aesthetic of the architecture and built form of the local buildings and structures, including the iconic corbel domed buildings, as well as the typical Karoo domestic buildings and townscape.
- At the same time, the design should not be overly parochial but should rather reflect the global nature of the SKA project and the international efforts behind its conceptualisation and realisation. While the building should affirm and celebrate the ancient and present cultural and natural heritage associated with its locality, it should also be forward-looking and present and embody a vision for the future; an inspirational building that reflects the science and vision behind the SKA project and that fosters a culture of collaboration and communication.
- The design of the building should be emblematic of the daring, inquisitive human impulse associated with space exploration as well as being reflective of a global mega-science project which is leading the development of cutting-edge engineering, technology, science and innovation in an effort to realise the MeerKAT and SKA science goals. The building should aim to achieve its own distinctive identity and unique architectural expression that is emblematic of the SKA and the science behind the project.
- The building design must utilise the appropriate green technologies to demonstrate a commitment to renewable energies and environmental sustainability

D1.2.5. DETAILED DESIGN PHASE (Construction Drawings)

The detailed design phase will include the submission of the following documents/drawings to the SARAO project team three weeks prior to the Critical Design Review being held (CDR):

- Written Detailed Design report/s & Scope of Work document in Word and PDF format;
- BIM modelling in 3D (if the successful tenderer is able to provide models progressed to 6D this would be an added advantage).
- All models to be provided to the SARAO and the appointed Construction Contractor for ease of use during construction, operations & maintenance;
- Construction Working Drawings in Autocad/REVIT/GIS format and PDF Format (including bending schedules, cable schedules, detailed specifications) and a detailed Bill of Materials for construction;
- Final Reliability, Availability, Maintainability report on all key components (HVAC, electrical, gas suppression & fire detection, back-up power etc.) and final Maintenance Strategy including complete Asset list (RASCI chart) to be handed over to the Employer;
- Final Test, Verification and Commissioning plan for construction of all the building elements and associated bulk infrastructure;
- Lifecycle costs of building (capital, operations & maintenance);
- Final Health & Safety Analysis;
- Final Product Assurance and Quality Management Plan for Construction;
- Project Management Plan for Construction, Test, Verification, Commissioning and Handover;
- Construction Schedule & Deployment strategy (including integration plan between different building and civil infrastructure components);
- Risk and Opportunity Register.
- Site investigation/ Studies,
- Definition of as-built requirements, spares, operations & maintenance manual requirements and consideration of support through Service Level Agreements for key equipment;
- Preliminary Concept, Concept Design, Detail Design, Final Design,
- Municipal approval,

The SARAO project team will review all documentation through an Observation Action Register (OAR) where it shall raise questions/comments/clarifications which will be submitted to the design team one week prior to the CDR. The design team

will present their responses to the OAR at the CDR in an effort to close-out these comments. SARAO shall publish a report within one week on whether the detailed design can be submitted for planning approval and the commencement of the procurement phase.

Bi-weekly progress meetings will be held between the design team and SARAO virtually or physically at an agreed location convenient to all parties. The Project Manager for the design team will be responsible for minuting the actions from each meeting including Requests for Information from the SARAO as and when required.

D1.2.6. SUBMISSION TO LOCAL MUNICIPALITY FOR APPROVAL

- The professional design team shall be responsible for notifying the Kareeberg Municipality / Northern Cape Government of the intention to commence building work timeously and coordinate any inspections required by the Kareeberg Municipality.
- The professional design team shall be responsible for submitting all final building design plans to the Kareeberg Local Municipality for approval prior to construction and obtaining the necessary construction permits/licenses required for construction.

D1.2.7. PREPARATION OF TENDER DOCUMENTATION FOR CONSTRUCTION

The professional design team shall be responsible for the preparation of all the tender documentation required to appoint a construction contractor for the project. This shall include the following:

- Developing tender specifications in compliance with the National Treasury Regulations and Preferential Procurement Policy Framework Act, 2000 and the Construction Industry Development Board (CIDB) Conditions of Tender;
- Conduct a Market Analysis of potential bidders meeting the required CIDB grading scale;
- Define the health, safety & environmental, quality assurance specifications in the tender documentation;
- Define the Contract Participation Goals for the contract and socio-economic upliftment requirements;

D1.2.8. PROCUREMENT

- The National Research Foundation procurement process shall apply
- The construction phase shall follow the FIDIC Yellow or Red book. SARAO and the consultant shall evaluate the best option post the concept design phase.

D1.2.9. CONSTRUCTION MANAGEMENT SERVICES

Undertake the Resident Engineer role during construction.

The design professional team shall perform the duties stated in the FIDIC Build contract (Yellow or Red Book) and shall be responsible for executing the following construction management administration role:

- Input into content of contractor appointment letter; insurances; performance guarantee requirements; health, safety and environmental management plan review and approval prior to construction; quality assurance plan review and approval prior to construction;
- Provide Project Management Plans, Statement of Works, Risk Register, Updated Stakeholder Register
- Undertaking any environmental walk-throughs required prior to and during construction (e.g. heritage, archaeological);
- Review and approval of the construction programme including project float, critical path items, holding points and items identified critical for integration;
- Convening weekly face to face site coordination meetings with the contractor and appointed sub-contractors to ensure proper coordination and integration;
- Undertake the Resident Engineer role on behalf of the SARAO to ensure that construction, testing, verification, commissioning and handover is done within budget, to the required quality and within the approved construction

timeline. (Level 3 construction monitoring in terms of the the Engineering Council of South Africa Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000), Government Gazette 39480, Board Notice 138 of 2015;1) Regardless of what contract will be utilised for the construction contractor, the Principal Agent/Resident Engineer will be required to obtain written approval from the SKA SA prior to any site instructions or variation orders are issued and providing the SARAO with any early-warnings of potential delays in the schedule which has an impact on cost;

- Project Implementation Plan or Project Programme must be provided in Excel Format / Microsoft Projects or Primavera. Schedules must be updated and maintained on a monthly basis
- Lead monthly face to face progress meetings including the recording of minutes, action items, review of the construction schedule, progress on implementing contract participation goals and socio-economic requirements as defined in the contract;
- Assessment, approval and submission of monthly payment certificates to SARAO for payment;
- Undertaking health, safety, environmental, quality assurance audits in conjunction with SARAO team;
- Ensuring that the required design disciplines are involved in inspections as applicable to their work during construction
- The following Levels of involvement in terms of the Engineering Council of South Africa Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000), Government Gazette 39480, Board Notice 138 of 2015 are expected from key design and engineering disciplines during construction which must be included in Pricing Schedule 1:

D1.2.10. TEST, VERIFICATION, COMMISSIONING & HANDOVER PHASE

The design professional team shall be responsible for executing the following during this phase:

- Coordinate and supply of operations and maintenance manuals by all suppliers and contractors as per SARAO defined requirements. This shall include the coordination and compilation of the final hand-over package.
- Liaise with the Kareeberg Municipality to coordinate the required inspections and issuing of the Certificate of Occupancy;
- Format both in hard copy and in soft copy. The hard copy must be signed off by the Consultant and Client.
- Lead the commissioning/integration plan of major equipment in conjunction with the Contractor and the SARAO;
- Taking overall responsibility for coordinating the compilation of the following as-built documentation between the design team (appointed bidder) and the Construction Contractor two months prior to completion of construction in preparation for achieving an as-built baseline (ABBL):
- Coordinate and undertake test and verification events between the contractor, the professional team and the SARAO (as defined in the construction schedule) in compliance with the test, verification and commissioning plan defined during the design phase;
- Lead all site acceptance tests that need to be undertaken by the contractor while being witnessed by the professional team and SARAO;
- Compile snag lists, ensure the contractor addresses the snags and issuing completion certificates (interim, practical, final);
- Engineer/design team and submitted to the SARAO;
- All test, verification and commissioning reports must be reviewed and signed by the relevant design engineering discipline/Architect and submitted to the SARAO;
- The final hand-over package must be submitted in hard and soft copy (PDF, word, dwg, dxf, excel etc.).
- Coordination of the training of operational staff for all equipment as per SARAO requirements;
- All finishing schedules etc.
- All Certificates of Compliance which are signed off by the design engineers and the contractor;
- Manage the defect-liability period by conducting an inspection on a quarterly basis for the period and prior to final

handover certificates are signed to identify defects which must be addressed by the contractor.

The bidder is required to comply to the following regulations but not limited to:

- SANS 1200 building specifications for all the civil works around the building,
- SANS 10400 – 1990 (latest update is 2022) – Building Regulations South Africa
- National Building Regulations and Building Standards Act No.103 of 1977 and SANS 10128 and T
- National Building Regulations (Part A, T and W)
- Occupational Health & Safety Act Regulations
- National Veld and Forest Fire Act (Act 101 of 1998)
- Local Authority By-Laws
- The Functions of SANS Codes and Standards
- The Fire Brigade Services Act as amended
- Fire Detection under SANS 10400 – Section T

SARAO Shall be responsible for executing the following during this phase:

- Accept As-built drawings (workshop, construction, other) in PDF, dwg, dxf, Visio & BIM Models in 3D
- Conduct Site inspection in the presence of the consultant and construction manager
- Compile snag lists, ensure the consultant and contractor addresses the snags and issuing completion certificates (interim, practical, final);
- Receive all Certificates of Compliance which are signed off by the design engineers and the contractor;
- All test, verification and commissioning reports shall be reviewed and signed by the relevant design engineering discipline/Architect and submitted to the SARAO.

D1.2.11 EXHIBITION CONTENT DEVELOPMENT PHASE

The quality of the visitor experience, to be provided by the exhibitions, displays and presentations, will be the key success driver for ensuring the popularity and sustainability of the Carnarvon Visitor Centre / Exploratorium.

Consistent with the intended visitor experience described in Annexure B, the following themes, exhibitions and displays are envisaged for the Visitor Centre:

Overarching Theme: The Exploration of Space & Place

The overarching theme of the Visitor Centre experience will be the Exploration of Space & Place, as described in Annexure B. Included here will be:

1. Space Exploration
 - The history of space exploration/astronomy from earliest times to the present
 - The development of the knowledge, the science, and the technology used to explore space
 - The (hi)story of astronomy in South Africa
 - The story of SKA (from the preparation of the bid to the present)
 - The science of SKA (including the scientific principles of astronomy, radio versus optical telescopes, etc.), utilising interactive displays, audio-visual presentations, etc.
2. Place Exploration
 - The (hi)story of Carnarvon and surrounds
 - The story of the earliest inhabitants, the! Xam and the! Xam Cosmos, the Xhosa, the early missionaries, the framers, etc.
 - The Karoo: people, archaeology, palaeontology, ecology, etc.

Besides the interactive exhibitions and displays, the Visitor Centre will also house a planetarium where fully immersive, audio-visual productions will be presented on subjects ranging from astronomy, science, social and natural history, etc., will be presented.

The visitor offering will also include experiential components, namely:

- Guided tours of the SKA site
- Guided walking tours of the MeerKAT National Park

- A Karoo Botanical Garden with interpretive signage describing the Karoo flora and fauna
- Stargazing to be staged at the outdoor amphitheatre
- The Carnarvon History & Heritage Walking Tour
- The Skietfontein Walking Tour

The project shall be designed and implemented according to the precepts of the legislations, regulations and protocols that are applicable to all public funded projects in South Africa. Project implementation will be guided by a detailed Project Implementation Plan that shall be formulated in consultation with the client and the key stakeholders.

- A documented project implementation management structure including lines of reporting, the delegation and management of tasks, deliverables, time frames, etc., shall be designed in alignment with the Project Implementation Plan.
- The final budget, with an online, real-time, expenditure and cash-flow tracking mechanism shall be implemented alongside the Project Implementation Plan.
- A detailed status report will be developed on the completion of each project implementation phase and submitted to the client for review and sign-off, before the implementation of the following phases.

The content development phases shall follow a phased approach such as:

Phase One: Development of a Conceptual Plan for the Displays & Exhibitions:

- The Conceptual Plan shall outline the broad vision and mission of the Centre and the values that inform its development, operations, and programmes. It also shall describe the principles that inform the development of exhibitions (permanent, temporary, virtual and travelling); the aims and objectives of the exhibition; potential audience categories; broad themes to be addressed; proposed content development strategies; stakeholder participation; and an overarching curatorial approach.

Phase Two: Development of a broad Narrative Outline for the Centre:

- The Exhibition Narrative shall outline the broad exhibition themes; strategies for connecting the narrative to the audience (display technologies and media, interactive and participatory interventions, education and public programmes, etc.) and a detailed exhibition development work plan.

Phase Three: Development of a Detailed Exhibition Narrative for the Centre:

- The detailed exhibition narrative shall expand the thematic framework agreed upon in Phase One, to include detailed content breakdown, i.e. the stories to be told in relation to each of the broader themes; suggest appropriate display or exhibition strategies to best present particular areas of content; and a broad plan of the exhibition facility.

Phase Four: Initial Exhibition Curation & Design:

- This shall include the development of detailed content briefs for researchers; identification of various storytelling methods and technologies to be used - written texts, images, film, interactive audio-visual technologies, augmented and virtual realities, performance, etc.; the identification and selection of artefacts, archival images, recordings, film footage, documents, etc., to complement texts; preparation of a schematic plan showing the proposed exhibition layout and plotting the visitor's journey through it; and sketch designs of various components to demonstrate the proposed design aesthetic.

Phase Five: Final Exhibition Curation & Design:

- This shall include detailed content, script and design development of texts, audio visual presentations, programming of digital displays, editing and proofing, etc.; as well as detailed exhibition display infrastructure and graphic design.

Phase Six: Exhibition Production:

- This shall include the printing of all graphic elements of the exhibition; production of all audio-visual, interactive, augmented and virtual reality displays; identification of appropriate service providers, tendering and facilitation of contracts for hardware supply; acquisition of interactive audio-visual hardware and equipment; fabrication of display infrastructure (display cases, etc.), acquisition of artefacts, etc.

Phase Six: Exhibition installation:

- This shall include the installation of all exhibition infrastructure, display cases, installations (AV, interactive etc.) lighting and sound; testing of equipment; the production of operating manuals; and assistance with administrative tasks - insurance, guarantees and warranties, etc.

Phase Seven: Closure and handover:

- This shall include attending to snags, training of staff, testing, and handover of all documentation and research.

D2: Agreements and Contract Data

Number	Heading	Pages
D2.1	Form of Offer and Acceptance	76
D2.2	Contract Data	81

D2.1 Form of Offer and Acceptance Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

BID NO: NRF/SARAO SHAO/40/2022-23 – APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA

The bidder, identified in the offer signature block below, has examined the documents listed in the tender data and addenda thereto as listed in the Schedule of Returnable Documents, and by submitting this offer has accepted the conditions of tender.

By the representative of the bidder, 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, within the Contract Period stated below.

A) THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

RAND (in words);

R (in figures)

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 to the tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Consultant in the Conditions of Contract identified in the Contract Data.

SIGNED ON BEHALF OF/BY THE BIDDER:

NAME	SIGNATURE
CAPACITY	DATE

Name and Address of Organisation:

SIGNED BY WITNESS:

NAME	SIGNATURE	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 and for the contract period offered. 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 D1: Agreements and Contract Data (which includes this Agreement)

Part D2: Pricing Data

Part D3: Scope of Work and Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts D1 to D3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Returnable Documents 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 Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule which must be duly signed by the authorised representative(s) of both parties.

The tenderer shall within two weeks of signing this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's implementing agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the FIDIC 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 of signature of this document, including the Schedule of Deviations (if any). Unless the tenderer (now Consultant) within five 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.

SIGNED ON BEHALF OF/BY THE EMPLOYER:

NAME	SIGNATURE
CAPACITY	DATE

Name and Address of Organisation

SIGNED BY WITNESS:

NAME	SIGNATURE	DATE

Schedule of Deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of Offer and Acceptance, the outcome of such Agreement shall be recorded here.
3. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the Contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above Agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. Subject

Details

2. Subject

Details

3. Subject

Details

4. Subject

Details

By the duly authorised representatives signing this Schedule of Deviations, 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 Documents, 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.

Schedule of Deviations (continued)

SIGNED ON BEHALF OF/BY THE TENDERER *(only on award of Contract)*:

NAME	SIGNATURE
CAPACITY	DATE

SIGNED BY WITNESS *(only on award of Contract)*:

NAME	SIGNATURE	DATE

SIGNED ON BEHALF OF/BY THE EMPLOYER:

NAME	SIGNATURE
CAPACITY	DATE

SIGNED BY WITNESS:

NAME	SIGNATURE	DATE

CONFIRMATION OF RECEIPT

The Bidder, (now Consultant), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the (day) of(month)(year)

at (place)

SIGNED ON BEHALF OF/BY THE CONTRACTOR *(only on award of Contract):*

NAME

SIGNATURE

CAPACITY

SIGNED BY WITNESS *(only on award of Contract):*

NAME

SIGNATURE

D2.2 Contract Data

Part 1: Contract Data Provided by the Client

CONDITIONS OF CONTRACT

The following General Conditions of Contract are applicable for this Agreement:

General Conditions which form part of the Conditions of Contract for **Client/Consultant of Model Services Agreement**, Fifth Edition 2017 (White Book) published by the International Federation of Consulting Engineers.

Copies of these General Conditions (White Book) may be obtained from the South African Institution of Civil Engineering (SAICE) (tel. 011 805 5947) or Consulting Engineers South Africa (CESA) (tel. 011 463 2022).

C2.2.2 PARTICULAR CONDITIONS

Part A: References from Clauses in the General Conditions:

Sub-Clause

1.1	Definitions																																					
1.1.2 2	The Project is	THE APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA.																																				
1.1.4	Client Representative	Yanga Balfour Email: ybalfour@sarao.ac.za																																				
1.1.5	Commencement Date	To be Confirmed																																				
1.1.8	Consultant's Representative																																					
1.1.9	Country	South Africa																																				
1.1.2 4	Time for Completion	916 Calendar Days <table border="1"> <thead> <tr> <th>Milestone</th><th>Duration</th><th></th></tr> </thead> <tbody> <tr> <td>Client Brief</td><td>14 days</td><td></td></tr> <tr> <td>Preliminary Concept Design</td><td>28 days</td><td></td></tr> <tr> <td>Update & Acceptance of Preliminary Concept Design</td><td>14 Days</td><td></td></tr> <tr> <td>Concept Design</td><td>28 days</td><td></td></tr> <tr> <td>Update & Acceptance of Concept Design</td><td>21 Days</td><td></td></tr> <tr> <td>Detailed Design</td><td>42 days</td><td></td></tr> <tr> <td>Update & Acceptance of Detailed Design</td><td>21 days</td><td></td></tr> <tr> <td>Submission to Local Municipality</td><td>60 Days</td><td></td></tr> <tr> <td>Preparation of Tender Documentation for Construction</td><td>14 Days</td><td></td></tr> <tr> <td>Procurement</td><td>TBC</td><td></td></tr> <tr> <td>Construction Management Services</td><td>674 Days*</td><td></td></tr> </tbody> </table> <p>Note:</p> <ul style="list-style-type: none"> - Duration for the construction period shall be confirmed upon completion of the detailed design phase. - SARAO shall provide formal acceptance and approval of each Milestone outputs - NRF procurement process shall be followed. 	Milestone	Duration		Client Brief	14 days		Preliminary Concept Design	28 days		Update & Acceptance of Preliminary Concept Design	14 Days		Concept Design	28 days		Update & Acceptance of Concept Design	21 Days		Detailed Design	42 days		Update & Acceptance of Detailed Design	21 days		Submission to Local Municipality	60 Days		Preparation of Tender Documentation for Construction	14 Days		Procurement	TBC		Construction Management Services	674 Days*	
Milestone	Duration																																					
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Submission to Local Municipality	60 Days																																					
Preparation of Tender Documentation for Construction	14 Days																																					
Procurement	TBC																																					
Construction Management Services	674 Days*																																					
1.3.1(C)	Communication	System of electronic communication accepted																																				
1.3.1(D)	Address of Communication (Client's address)	2 Fir Street Black River Park Observatory																																				

		Cape Town 7925 <i>Email – Only when email is accepted as valid system for electronic communication</i>
	Telephone number	+27(0)21 506 7300
	Facsimile number	
	Consultant's address	
	Email Address	
	Facsimile number	
1.4	Law and Language	English
1.4.1	Law Governing Agreement	
1.4.2	Ruling Language of Agreement	Republic of South Africa
1.4.3	Language for communication	English
1.6	Assignments and Sub -Contracts	"The Consultant shall ensure that the requirements imposed on the Consultant by Sub-Clause 1.8[Confidential Details] apply equally to each Subcontractor."
1.8	Confidentiality	"Any disclosure of information that form part of the contract shall not be disclosed without prior consent of the other Party."
1.8.3	Period for expiry of confidentiality	
1.9	Publication	
1.9.1	Publication Restrictions	
3.9	Construction Administration	
4	Delays	
4.3.1	Programme	Accepted programmes shall be Primavera P6, Excel, MS Projects
4.4.1	Delay Penalty	Execution penalties of 0.05% of the Final Contract Price per day, to a maximum amount of 10% of the Final Contract Price will be applied should the consultant not meet the Required Levels of Performance defined in the Table above.
5.2.	Agreement of Variation Value and Impact	
7.2.1	Time for Payment	30 days after approval of the Payment Certificate
7.2.2	Remuneration and Payment – Appendix 3	
	Cost Price Adjustment (CPA)	The prices will be fixed and firm for up to twelve months from signing of the contract. After that subject to escalation.
	<u>Coefficient scope of index</u> 'a = 0.85 'b = 0.15 Fixed = 1	0.85 linked to the index for Table B1 – CPI Headline index (Dec 2016) published by STATISTICS South Africa, document P0141. The base date for indices is 12months after the Tender award. (Contract Prices Adjustment will be paid in arrears in three (3) month intervals)
7.4	Third Party Charges on Consultant	
8.2	Duration of Liability	
8.2.1	Period of Liability	
8.3	Limit of Liability	

8.3.1	Limit of Liability	Shall be applicable to all delays or costs incurred from design errors, incorrect bills of materials, site conditions and incorrect cost estimation.
9	Insurance	
9.1.1	Insurance to be taken out by Consultant	
	Professional Indemnity Insurance	The Party responsible for the matter giving rise to a claim, to the extent responsible therefor, shall be responsible and liable for the payment of deductibles under any policy of insurance under which it is an insured party or under any policy of insurance is required to maintain under this contract. In the event that responsibility for the matter giving rise to the claim is indeterminable, the First Named Insured under the policy of insurance is responsible and liable for the payment of deductibles.
	Public Liability Insurance	
10	Disputes and Arbitration	
10.4.1	Arbitration Rules	To be confirmed
	Language of Arbitration	English

Part B: Additional Clauses:

1 General Provisions

1.1 Definitions

1.1.1 "Agreement" means the Form of Agreement together with the Client/ Consultant Model Services Agreement (General Conditions and Particular Conditions), Appendix 1 [Scope of Services], Appendix 2 [Personnel, Equipment, Facilities and Services of Others to be Provided by the Client], Appendix 3 [Remuneration and Payment], Appendix 4 Programme], and Appendix S [Rules for Adjudication] and any letters of offer and acceptance attached to any of the above.

Deleted and replace 1.1.15 with:

"Contract Agreement" means the Form of Offer and Acceptance.

1.1.4 "Client's Representative" means the person referred to in the Particular Conditions, or appointed from time to time by the Client, and communicated by Notice to the Consultant to be its representative for the administration of the Agreement.

1.1.5 "Commencement Date" means the date identified in the Particular Conditions; where no date is identified then the Commencement Date shall be 14 days after the Effective Date.

1.1.7 "Consultant" means the professional firm or individual named in the Form of Agreement and legal successors to the Consultant and permitted assignees.

1.1.21 "Programme" shall have the meaning given to it in Clause 4.3 [Programme]. Consultant Model Services Agreement

Sub-Clause 1.15 Priority of Documents

Deleted and replace with:

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Form of Offer and Acceptance;
- b) The Appendix to Tender within the Contract Data;
- c) The Particular Conditions within the Contract Data;
- d) These General Conditions;
- e) The Employer's requirements;
- f) Standard and Project Specifications; and

g) The Schedules / Programmes.
If any ambiguity or discrepancy is found in the documents, the engineer shall issue any necessary clarification or instruction.

CLAUSE 5 VARIATIONS TO SERVICE

Sub-Clause 5.2 Agreement of Variation Value and Impact

Add the following after the Fourth Paragraph
:

"The value of the payment certificate is to be adjusted in accordance with the Contract Price Adjustment Schedule determined according to the formula, where applicable:

$$(1-x) \left[\frac{C_t}{C_o} - 1 \right]$$

in which the symbols have the following meaning:

'x' is the proportion of "Ac" which is not subject to adjustment. Unless otherwise stated in the Appendix this proportion shall be 0.15.

Where the index C shall be the Consumer Price Index for the historical metropolitan areas (CPI) as published by Statistics South Africa in Table B.1 of Statistical release P0141.

The suffix 'o' denotes the basic index applicable to the base month, which shall be the month prior of the expired 12 month fixed priced contract.

The suffix 't' denotes the current index applicable to the month in which the last day of the period falls to which the relevant payment certificate relates.

CLAUSE 9 INSURANCE

9.1.1 Insurances to be Taken out by the Consultant

Insert the following at the end of the last sentence of the first paragraph The Consultant, at their own cost, effect and maintain the insurances listed below in the joint names of the NRF and the contractor. The NRF as the Client requires proof of the following insurances.

9.1.1 Public Liability Insurance

The minimum amount of cover for insurance against loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Consultant) arising from or in connection with the Consultant Providing the Works. The limit of indemnity for Public Liability Insurance must be R3 million.

Professional Indemnity

The minimum amount of cover in respect of any allegation made against bidder for professional negligence in the practice of their profession. The limit of Indemnity for Professional Indemnity Insurance must be R3 million.

9.1.2 Insert the following at the end of the sentence. Special Insurances

In addition to the insurances required above, the following must be in place in the Consultant's name:

Personal Accident

The minimum amount of cover for insurance against death of or bodily injury to employees of the Consultant arising out of and in the course of their employment in connection with the contract for any one event is as prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the Consultant's common law liability for people falling outside the scope of the Act.

CLAUSE 10 DISPUTES AND ARBITRATION

Sub-Clause 10.2 Adjudication

Insert the following as a new penultimate paragraph:

'If the decision of the DAB requires a payment by one Party to the other Party, the DAB may require the payee to provide an appropriate security in respect of such payment'

Sub-Clause 10.5 Failure to Comply with Adjudicator's Decision

Replace Sub-Clause 210.5 in its entirety with:

'In the event that a Party fails to comply with any decision of the DAB, whether binding or final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 10.4 [Arbitration] for summary or other expedited relief, as may be appropriate. Sub-Clause 10.5 [Obtaining Dispute Adjudication Board's Decision] and Sub-Clause 10.3 [Amicable Settlement] shall not apply to this reference.'

Part 2: Data Provided by the Consultant

Clause 1.2.1: Delivery of Notices

The name of the Consultant is

The address of the Consultant is

Physical Address

Postal Address

Telephone:

Fax:

Email:

SIGNED ON BEHALF OF/BY THE BIDDER:

NAME	SIGNATURE
CAPACITY	DATE

D3: Pricing Data and Pricing Schedule

Number	Heading	Pages
D3.1	Pricing Instructions	87
D3.2	Pricing Schedule	88

D3.1 Pricing Instructions

1. **Only fixed and firm price will be accepted.** Non-fixed and firm prices (including prices subject to rates of exchange variations) will not be considered.
2. Price quotes is **fully inclusive** of all costs including delivery to the specified NRF site; Value Added Tax (VAT) and other taxes (this includes all disbursement and travel costs) and Consumer Price Adjustment (CPA) per annum.
3. A full breakdown of costs, including the detailed pricing schedules (Annexure A), contingencies, professional fees, travel and disbursements must be in format as set out below and, where applicable, in supporting schedules and provided.
4. The completed detailed pricing schedule Annexure A shall form part of this tender submission and will be completed in **black type or black ink only**.
5. The Conditions of Contract, the Contract Data and the Scope of Work shall be read in conjunction with the Pricing Schedule.
6. Bid price in South African currency, foreign exchange risk is for the account of the bidder.
7. It will be assumed that prices included in the Pricing Schedules are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date of bids (refer to www.stanza.org.za or www.iso.org for information on standards).
8. All costs associated with compliance to the Occupational Health and Safety Act, the National Environmental Management Act and the Water Act must be included in the bidding price where applicable.

D3.2 Pricing Schedule

NOTE: SERVICE PROVIDER SHALL PROVIDE A COMPLETED DETAILED PRICING SCHEDULE AND IT SHALL FORM PART OF THIS TENDER SUBMISSION AND WILL BE COMPLETED IN BLACK INK ONLY.

Item	Description	Unit	Quantity	Rate	Amount
1	Site Investigation/Studies				
1.1	Geotechnical Investigation & submission of report (including P&Gs, health and safety obligations, test drills, testing etc.)	Item	1		R
1.2	Topographical Survey & submission of report & drawings (including any P&Gs, equipment establishment costs)	Item	1		R
1.3	Sub-Total				
2	Building - Design Phase				
2.1	Client Brief Review/ Workshop	Item	1		R
2.2	Preliminary Concept Design	Item	1		R
2.3	Update & Acceptance of Preliminary Concept Design	Item	1		R
2.4	Concept Design	Item	1		R
2.5	Update & Acceptance of Detail Concept Design Review	Item	1		R
2.6	Detail Design	Item	1		R
2.7	Update & Acceptance of Detail Design Review	Item	1		R

2.8	Submission & approval of plans to Municipal for approval	Item	1		R
2.9	<i>Sub-Total</i>				
3	Content Development - Design Phase				
3.1	Client Brief Review/ Workshop	Item	1		R
3.2	Preliminary Concept Design	Item	1		R
3.3	Review & Update of Preliminary Concept Design	Item	1		R
3.4	Concept Design	Item	1		R
3.5	Review & Update of Detail Concept Design Review	Item	1		R
3.6	Detail Design	Item	1		R
3.7	Review & Update of Detail Design Review	Item	1		R
3.8	<i>Sub-Total</i>				
4	Procurement Phase as per NRF Process				
4.1	Procurement strategy document	Item	1		R
4.2	Preparation of tender documentation for the appointment of a Contractor	Item	1		R
4.3	Participating in the tender Briefing and Clarifications	Item	1		R

4.4	Participate in NRF tender evaluation process and give input for recommendation report	Item	1		R
4.5	Sub-Total				
5	Construction Management Phase				
5.1	As stated in the Scope of work - CONSTRUCTION MANAGEMENT SERVICES (Page 58) (<i>Payments to be claimed monthly</i>)	Item	1		R
6	Test, Verification, Commissioning & Handover Phase				
6.1	As stated in the Scope of work (Pages 58)	Item	1		R
7	Additional (Ad-Hoc) professional Lead Architecture services as instructed by SARAO Representative.	Hrs	200		R
8	Provisional Sum for further Site Studies as instructed by SARAO Representative	Sum	1	R500 000.00	R500 000.00
9	<u>Disbursement</u> (All-inclusive travel cost, travel time, accommodation, printing, copying,) – <i>Costs are for the design, construction management, test, commissioning, verification and handover phase.</i> Detail list to be provided as part of the submission and be paid on actuals / proof provided.	Item	1		R
10	SUB-TOTAL 1.3, 2.9, 3.8, 4.5, 5.1 , 6.1, 7, 8 & 9 (EXCLUDING VAT)				R
11	VALUE ADDED TAX (15%)				R
12	TOTAL (INCLUDING VAT) CARRIED TO FORM C1.1 OFFER AND ACCEPTANCE AGREEMENT				R

SUMMARY FOR BID OPENING PURPOSES

NAME OF BIDDER:

OFFERED TOTAL: R.....
(Amount brought forward from
The Form of Offer) *

* Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall apply.

SIGNED BY/ON BEHALF OF BIDDER

NAME

SIGNATURE

DATE

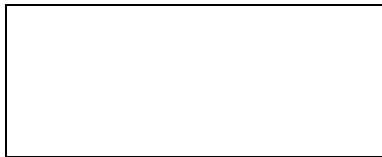
COMPANY STAMP

Declaration

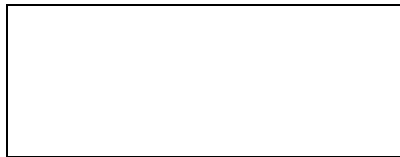
(In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part D2 of this Contract Document in consecutive order upon which my/our tender for the **BID NO: NRF/SARAO SHAO/40/2022-23 – APPOINTMENT OF A MULTIDISCIPLINARY TEAM (LED BY AN ARCHITECTURAL CONSULTANT) TO PROVIDE SITE STUDIES, DETAILED DESIGNS (BUILDING WORKS & EXHIBIT CONTENT) AND PROJECT MANAGEMENT SERVICES FOR THE NEW CARNARVON SCIENCE EXPLORATORIUM IN CARNARVON, NORTHERN CAPE, SOUTH AFRICA** has been based.

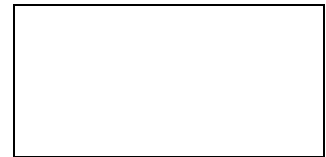
SIGNED BY/ON BEHALF OF BIDDER



NAME



SIGNATURE



DATE

A Annexures

Annexure No.	Annexure Title
Annexure A	High level Preliminary layout
Annexure B	High Level Vision & Concepts
Annexure C	Previous feasibility study
Annexure D	SARAO CSVCS Requirements Specifications Document