



**APPOINTMENT OF A
CONTRACTOR TO**

**SURVEY THE ACCESS ROAD
AND BOUNDARY PERIMETER
OF SANS MATJIESFONTEIN
SITE**

SANSA is an entity of the Department of Science and Innovation



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List of Abbreviations

LEGS	- Lunar Exploration Ground Sites
OHSA	- Occupational Health and Safety Act
PFMA	- Public Financial Management Act
PPE	- Personal Protective Equipment
QA	- Quality Assurance
SANSA	- South African National Space Agency
SANS	- South African National Standards
SOW	- Scope of Work

1. INTRODUCTION

1.1 Purpose of the Document

This document serves to detail the Scope of Work for the survey of a +/- 3.5 km, 4m wide access road, along with a 4km, 6m wide fence border, located at the newly established SANSA Matjiesfontein site in the Western Cape.

1.2 Background

The South African National Space Agency (SANSA) is designated as a PFMA Schedule 3(A) public entity, established under the South African National Space Agency Act, 2008 (Act No 36 of 2008). SANSA's mandate encompasses the coordination and integration of national space science and technology programmes. Its scope also extends to the long-term strategizing and execution of space-related initiatives in South Africa, serving the broader interests of its citizens. Detailed information about SANSA is accessible at <http://www.sansa.org.za>

Matjiesfontein, a town situated in the Western Cape, has been earmarked as the venue for NASA's new Lunar communication facility and the Lunar Exploration Ground Sites (LEGS) antenna. A collaborative agreement has been forged between SANSA and the Matjiesfontein Trust. Additionally, the Department of Agriculture has granted SANSA the requisite authorization to develop the ground station on the identified land in Matjiesfontein see below:



Figure 1 The Proposed Survey Area in Matjiesfontein Town, Western Cape

2. STATEMENT OF WORK (SOW)

2.4 Scope of Work

The Contractor is responsible for providing surveying for the project mentioned in this document. This should be done in strict accordance with the design drawings and specifications detailed in this document.

2..1 Information Issued for Tender Purposes

The Contractor is to refer to the following project information, included within the document, as listed below:

- a. Scope of Work for Construction
- b. Design Drawings
- c. Specifications

2..2 Description of Activities

The contractor is expected to conduct an on-site inspection to familiarise themselves with the project's scope and associated documentation. This ensures that their pricing encompasses all necessary materials, equipment, and resources. A comprehensive survey of the proposed grading route is imperative before any construction initiation. The contractor must verify all existing services within the construction parameters before establishing the grading route and fence line.

The construction of the project will be carried out in accordance with the design drawings provided in this document, as well as complying with all SANSA, national and international codes, and standards, while adhering to good engineering practices.

The following section 2.3.1 Description of Works outlines the process to be followed by the appointed contractor.

2.4 Drawing

Below **Error! Reference source not found.** is an Overall Site Plan Layout Showing Proposed New Boundary Line



Figure 2 Overall Site Plan Layout with Proposed Gravel Road and Site Boundary the needs to be surveyed.

Estimated the 4-meter-wide gravel road intersection points coordinates are as follow:

33°13'53.06"S, 20°34'40.84"E

33°13'57.13"S, 20°34'39.40"E

33°14'17.24"S, 20°34'23.79"E

33°14'32.65"S, 20°33'13.12"E

Estimated the 6-meter-wide fence boarder corner coordinates are as follow:

33°14'24.18"S, 20°32'30.05"E

33°14'20.96"S, 20°33'13.24"E

33°14'50.25"S, 20°33'12.95"E

33°14'53.71"S, 20°32'28.44"E

General Notes

- a. All setting out must be conducted by a registered Professional Land Surveyor.
- b. On-site verification is important for all dimensions.
- c. Execute all work in strict accordance with relevant and applicable legislation (SANS 1200, OSHA, NEMA, etc)
- d. Uneven terrains, particularly at river crossings, dongas, and ridges, should be meticulously identified. A clear strategy for levelling and compacting, without disrupting water flow, must be communicated.
- e. The Contractor is to exclusively use the dimensions provided in on the Drawings for setting out the Works. Any deviation from surveyor pins and plan need to communicate to surveyor and SANSA

2.3 Specifications

2.3.1 Standard Engineering Specifications and Applicable legislation

While not included or bundled within this document, the following SANS 1200 Standard Specifications for Civil Engineering Construction, are integral to the Contract Documents. The Contractor is expected to acquaint themselves with the SANS 0120 Code of Practice (latest edition), which holds equal relevance.

SANS 1200 A 1986 : General

SANS 1200 C 1980 : Site Clearance

SANS 1200 DA 1988 : Earthworks (Small Works)

TMH 11 : Standard Survey Methods

Occupational Health and Safety Act (OHSA), 1993 (Act No. 85 of 1993)

Municipal By-laws and Regulations

2.3.2 Description of Works

- a. Physically inspect the proposed site to identify any apparent obstacles or challenges.

- b. Mark the proposed centreline of the road and boarder fence using stakes to give a visual representation of the alignment for the specified +/- 3.5 km x 4m access road and the 4km x 6m boundary fence.
- c. Incorporate the survey data into a detailed design, including cross-sections, longitudinal profiles, and drainage plans.
- d. Mark the exact boundaries and grades for construction.
- e. Compile all gathered data into comprehensive reports, including maps, plans, and any recommendations.
- f. Regularly liaise with SANSA representatives, ensuring the project aligns with the outlined requirements. Address feedback and concerns from stakeholders promptly.
- g. Adress any concerns that the contractor might have in grading process.

2.3.3 Description of Site and Access

The SANSA Matjiesfontein site is situated in the Laingsburg Municipalities in the Western Cape Province. To gain access to the site contractor needs to contact SANSA representative to arrange access to the site. No access will be granted without prior permission.

2.3.4 Site Usage

The Contractor is mandated to consistently maintain a safe, clean, and organized site environment. Additionally, stringent measures should be in place to minimize disruptions, particularly in ecologically delicate areas within the site, ensuring no detrimental environmental outcomes arise.

Housing provisions are not provided by the project. Consequently, the Contractor is responsible for organizing accommodation for their workforce and managing their daily transportation to and from the site.

Contractors are strictly prohibited from operating outside the designated working hours, which are weekdays from 8am to 5pm. Disruptions to local residents should be minimized at all times.

2.3.5 Survey Control and Setting Out of the Works

The complete setting out of the works falls under the Surveyor. The Surveyor is obliged to promptly assist Contractor should any discrepancies

arise. Prior to the commencement of the Works or any particular phase, the surveyor must engage with pertinent stakeholders and relevant authority officials to determine any existing services on site. The Survey engineer provides survey control points and relevant setting out data. It is binding upon the surveyor to validate the accuracy of these survey control points and to utilise them for accurate setting out of work.

2.3.6 Local Labour Market Stimulation

The contractor is required to submit a detailed plan outlining how and where of local labour and resources will be used. It is imperative for the contractor to prioritize the engagement of local labour and resources to the greatest extent possible. The Tenderer must ensure all employee remunerations align with the stipulated sectorial determinations under the Basic Conditions of Employment Act, as mandated by the Department of Labour.

2.3.7 Quality Assurance (QA)

The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure. However, the final approval of the works rests with the Surveyor and SANSA.

2.3.8 Security

Contractor shall provide security for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team. SANSA will not be held responsible for loss or damage for equipment or materials.

2.3.9 Occupational Health and Safety Measures

The Contractor shall fulfil all the requirements prescribed by Occupational Health and Safety Act 85 of 1993 for the duration of the project. All equipment used, installation, assembling and execution of tasks whether detailed in this specification or not shall comply with the requirements of the OSHA as well as local bylaws. All equipment shall be designed to be **fail safe**. At all times, the contractor will be responsible for safety of all their employees onsite as well as their assets.

2.3.9.1. Safety, Health and Environment (SHE Specification)

Prior to the commencement of the contract, the contractor shall be issued with a SHE (Safety, Health and Environmental) specification in order to compile a SHE File in line with SANSA contractor requirements for approval. (See attached SHE file Index and Specification)

Suitable barricading and danger tape must be put around all open trenches and excavations near buildings or where such a trench or excavation may pose a hazard for pedestrians, animals and/or vehicles. This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2. Contractor shall adjure to all health and safety standards prescribed by SANSA.

2.3.9 Preliminary Programme

The Contractor shall be deemed to have allowed fully in his rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data. The preliminary programme to be submitted with the tender shall be used as the basis for this programme.

2.4 Management of the Environment

The Contractor shall fulfil all the requirements prescribed by National Environmental Management Act 108 of 1998 and it's applicable sema's for the duration of the project as well as local bylaws governing the jurisdiction of the project.

Prior to the commencement of the contract, the contractor shall submit an Environmental Managing Plan to SANSA detailing how environmental aspect and impacts emanating from the project will be managed and minimised.

The Contractor shall pay special attention to the following:

2.4.1 Natural Vegetation

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work.

2.4.2 Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire, the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

2.5 Applicable Documents

The following documents are applicable to the extent stated herein. In the event of conflict between the contents of the applicable documents and this document, the applicable documents shall take precedence.

Document Number / Description
SSO-IMS-Final EIA Report Matjiesfontein
SANSA Draft EMPr Cleint Review 21 October 2020
SANSA Ecological report – Client Review
SHE Specification
SHE file index
Section 37 to mandatory agreement
Geo Tech report
Flood line assessment report

3 REFERENCE DOCUMENTS

4 DOCUMENT APPROVED

NAME	SIGNATURE	POSITION	APPROVAL DATE