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WGS-84 Surveying and Obstacle Evaluation



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ABOUT ATNS

Air Traffic and Navigation Services SOC Limited (ATNS) provides air traffic, navigation, training and associated services within South Africa. ATNS is responsible for Air Traffic Control through **South Africa** and a large part of the **Southern Indian and Atlantic Ocean**, comprising approximately **10% of the world's airspace**. ATNS operates from nine ACSA and 12 other aerodromes. As a **globally competitive employer of choice**, ATNS is committed to diversity and has achieved ranking within the **top 10 companies** in South Africa with regards to female representation at executive levels.



Our vision

To be the **preferred supplier** of Air Traffic Management solutions and associated services to the African Continent and selected international markets.

Our mission

To provide **safe, expeditious and efficient** Air Traffic Management solutions and associated services.

Our services extend beyond Air Traffic Control services into the provision of **vitaly important aeronautical information** used for all flight planning purposes as well as search and rescue coordination activities, and the maintenance of a reliable navigation infrastructure.

WHAT IS WGS-84 SURVEYING AND OBSTACLE EVALUATION?

The **World Geodetic System of 1984** (WGS-84) provides the aviation industry with a standard coordinate reference framework for the Earth ensuring an **accurate database** of information that charts all known and measurable raw altitude data. Currently, the coordinate origin of the WGS-84 information is **accurate to within 5cm**. This information is **essential** for all flight planning, route design and cartography requirements in aviation.

Current, up-to-date and accurate obstacle data is necessary to ensure the **safe, efficient movement** of aircraft in and around airports and the airspace above. Constant planning and feedback ensures that the **ICAO Standards and Recommended Practices** are adhered to and that a given radius around any airport **remains clear of obstacles**.



FEATURES OF WGS-84 SURVEYING AND OBSTACLE EVALUATION

ATNS is able to provide **consultation services**, as well as **raw data** for proposed developments that may interfere with safe air navigation service provision across Africa.

The Flight Procedures Section of the Aeronautical Information Services Department has the **infrastructure, equipment and expertise** to provide an Aeronautical Air Traffic Management and Communication, Navigation and Surveillance system evaluation service. This service is conducted in accordance with **ICAO Standards and Recommended Practices**, taking into consideration customer requirements.

Evaluations of **proposed or existing structures and developments** are conducted in terms of:

- Protection of navigational aids (Radar, ILS, VOR, Communications etc) including the impact on the signal in space
- ICAO obstacle-free surfaces
- All instrument approach procedures

Alongside **WGS-84 and Obstacle Evaluation services** within South Africa, ATNS is able to provide a **full, up-to-date and accurate** service across Africa. The services include **satellite surveillance, computer-aided checking and survey technicians**.

By integrating **high-tech** survey techniques, from field surveys to software post-processing, **highly comprehensive** reports have been generated. These reports and data sets can also be **tailor-made** to suit client requirements through the provision of a wide range of **CAD and GIS formats**.

BENEFITS OF WGS-84 SURVEY AND OBSTACLE EVALUATION

With **safety** as our **primary mandate** we aim to assist other providers with offering the same level of safety. ATNS has ensured that our WGS-84 and Obstacle Evaluation data can provide the following:

- Data integrity
- Availability of information
- Accurate obstacle documentation
- Safeguarding of airspace
- The foundation for procedure design and charting

Our dedication to this is made manifest through our **international reputation**. ATNS's services in this field are utilised by a significant number of states on the Continent. We **take pride** in ensuring our technological capabilities are **up-to-date and accurate** and that our data integrity is of the **highest standard**.

Benefits of a WGS-84 survey include:

- Compliance to the ICAO regulations
- Movement of tectonic plates necessitates that WGS-84 is conducted in order to remain compliant and not compromise on safety
- Regular checking of obstructions around the airport ensures safety and compliance
- Annex14 obstacle evaluation
- Calibration of instruments

ENGINEERING SURVEYS

ATNS's survey team consists of a **professional land surveyor** and a **registered surveyor**. ATNS offers the following engineering surveys:

- Analysis of airports as-builts according to ICAO standards
- Monitoring VOR calibrations
- PAPI calibration
- Surveying ILS ground check-points
- Provision of Digital Terrain Models
- Topographical surveys

OTHER SERVICES OFFERED BY ATNS

- Aeronautical Information Management
- African Regional Monitoring Agency Services
- Airspace Design
- Billing and Collections Management
- Central Airspace Management Services
- Training
- Engineering and Technical Services
- File2Fly
- Flight Procedure Design and Cartography
- Maintenance Management System
- NAFISAT and SADC VSAT
- Safety Management System XTRAX
- Upper Airspace Service Provision
- Risk, Security and Quality Compliance Services

OUR SATISFIED CUSTOMERS

National

- Airports Company South Africa (ACSA)
- Lanseria Airport Management
- Ekurhuleni Municipality
- OSBORNE OAKENFULL & MEEKEL
- Stewart Scott International
- Caro Nome Properties (Pty) Ltd
- Future Plan Urban Design and Planning Consultants cc

International

- Cape Verde
- Democratic Republic of Congo
- Namibia
- Swaziland
- United Nations

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