

	<p style="text-align: center;">Scope Of Work</p>	<p style="text-align: center;">Hendrina Power Station</p>
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Title: **Bullet proof security Guard Offices**

Unique Identifier: BBA 14

Alternative Reference Number: N/A

Area of Applicability: **Engineering**

Documentation Type: **Specification**

Revision: **1**

Total Pages: **11**

Next Review Date:

Disclosure Classification: **CONTROLLED DISCLOSURE**

Compiled by	Functional Responsibility	Authorised by
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• **SUPPLY AND INSTALL STANDARD GUARD HOUSE CABIN WITH WINDOWS (2.4M X 3M) WITH 12000 BTU COMMERCIAL AIR CONDITIONER X 6, AND 4 X EXTERNAL LED SPOTLIGHTS FOR EACH GUARD HOUSE, INCLUDING WATER CONNECTION WHERE REQUIRED, PLUMBING AND SOLAR PANEL WHERE THERE IS NO ELECTRICITY CONNECTION POINT, PROVIDE DB BOX, COC..... 7**

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2. INTRODUCTION

Hendrina Power Station is a National Key Point, comprising critical remote areas that house highly valuable Eskom assets and personnel. A surge in crime-related incidents has been reported at Hendrina Power Station, indicating a need for enhanced security measures.

Bulletproof guardhouses will be erected at manned Eskom sites where security officers are required and deployed 24/7 for site protection, and where the use of such facilities is deemed feasible.

3. SUPPORTING CLAUSES

3.1 SCOPE.

This document describes the technical requirements for the Bullet proof guard offices for Hendrina Power Station.

3.1.1 Purpose

The purpose of this document is to provide guidance and specify the requirement for the installation of the bullet proof Guard offices for Hendrina Power Station

3.1.2 Applicability

The document shall apply at Hendrina Power Station within Eskom Holdings Limited.

3.2 NORMATIVE/INFORMATIVE REFERENCES

3.2.1 Normative


- [1] ISO 9001 Quality Management Systems
- [2] PW 371 Specification of Materials and Methods to be used
- [3] PW Drawings Type Guard House (Provisional), Drawing Number 003, dated 18/11/2009
- [4] SANS 1263 – Part 3 Class RB Bullet-resistant Glazing Materials
- [5] British G3 Standard for Security Doors
- [6] Interior Doors SANS 545:1989 Class 1. Wooden Doors
- [7] SANS 10389 – 2:2007 Edition 1.1. Exterior Security Lighting
- [8] Act 60 of 2000, Firearms Control Act
- [9] Act 75 of 1969, as amended, Arms and Ammunition Act
- [10] Act 53 of 1985, Control of Access to Public Premises and Vehicles Act
- [11] Act 68 of 1995, South African Police Service Act
- [12] Act 6 of 1959, Trespass Act
- [13] Act 85 of 1993, Occupational Health and Safety Act
- [14] Act 56 of 2001, Private Security Industry Regulation Act.

4. INFORMATIVE

- [15] SABS 1222: Protection of Enclosures
- [16] SABS 1200: Standardised Specifications for Civil Engineering Construction
- [17] Eskom Drawing 0.54/5007: Earthing Standard

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[18] Specific security design and layout drawings as compiled by the Security Division

[19] Mine Health and Safety Act, 1996 (Act No 29 of 1996)

[20] Occupational Health and Safety Act (OHSA) Act 85 of 1993

[21] National Environmental Management Act (section 28 of 1998)

4.1 DEFINITIONS

This section includes all definitions applicable to this document, including an explanation of terms used

Definition	Description
Controlled disclosures	Controlled disclosure to external parties (either enforced by law or discretionary).
Join Planning Committee (JPC)	Committee established by the owner of a national key point in collaboration with the local security services, SA Police Service, and Civil Defence to coordinate plans and allocate responsibilities.
PSIRA Registration	Registration with the Private Security Industry Regulatory Authority is necessary for the provision of all security services in respect of all Eskom installations in terms of the following legal requirements:

4.1.1 Disclosure Classification


Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

4.2 ABBREVIATIONS

Abbreviation	Description
Abbreviation	Description
COC	Certificate of Compliance
BRG	Bullet-resistant glazing
BTU	British thermal units
BU	Business unit
DB	Distribution box
DCP	Dry chemical powder
Ltd Limited	Limited
Lux	Unit of luminance or illumination in SI system
NKP	National Key Point
PSIRA	Private Security Industry Regulatory Authority
Pty	Proprietary

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SABS	South African Bureau of Standards	
SANS	South African National Standard	
SI	Systems International	

ROLES AND RESPONSIBILITIES

2.4.1 The engineering will follow an ECM process, involve all relevant stakeholders to ensure that Bullet – resistant guardhouse is up to date, and all intrusions or intrusion attempts are detected and reported immediately.

2.4.2 Procurement Officials must refer to this standard in their purchasing documents, the equipment and material offered for purchase meet the requirements of this standard.

2.4.3 Security Manager is responsible for the maintenance and upkeep of this standard.

2.4.4 Security Managers are responsible for the development of procedures and performance measures to ensure that the standard is implemented and maintained.

PROCESS FOR MONITORING

Eskom processes shall be always adhered to. The contractor shall be responsible for the Provision of all services associated with the concept and implementation of a programme for quality assurance control.

- Installation

Monitor progress against project schedule.

Inspect material and workmanship.

Ensure adherence to safety protocols.

- Quality Control

Conduct regular inspections.

Check for defects or deficiencies.

Verify compliance with standards and regulations.

- Testing and commissioning

Witness testing of bulletproof features (e.g., ballistic glass, doors)

Ensure proper functioning of security systems (e.g., alarms, cameras)

Verify compliance with project requirements.

4.3 RELATED/SUPPORTING DOCUMENTS

Not applicable

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5. SYSTEM REQUIREMENTS

5.1 OPERATIONAL NEED IDENTIFIED

A surge in crime related events has been reported in Hendrina power station to critical infrastructure remote areas precisely, Upper ash dam, Old lower ash dam, New Lower Dam, Main sewage plant access gate, Sewage transfer plant, ash dam main access gate and this can imply that security improvement is needed. Bullet – resistant guardhouse is required to be utilized 24/7 for site protection.

The table below indicates the areas that require the Bullet – resistant guardhouse as per requirements from the end-user.

New Lower Dam - Electricity connection including DB Box, COC to be provided by supplier, no water connection required, 4 x external LED spotlights and 12000 BTU commercial air conditioner
Upper ash dam - Electricity connection including DB Box, COC to be provided by supplier, 4 x external LED spotlights and 12000 BTU commercial air conditioner, no water connection required
Old lower ash dam - Electricity connection including DB Box, COC to be provided by supplier, water connection and plumbing, 4 x external LED spotlights and 12000 BTU commercial air conditioner
Main Sewerage plant access gate - Electricity connection including DB Box, COC to be provided by supplier, water connection and plumbing, 4 x external LED spotlights and 12000 BTU commercial air conditioner
Sewage transfer plant properties - Electricity connection including DB Box, COC to be provided by supplier, water connection and plumbing, 4 external LED spotlights and 12000 BTU commercial air conditioner
Ash dam main access gate – Solar panels to be provided by supplier, 4 x external LED spotlights

5.1.1 The high-level project scope is as follows:

The high-level work expected from the project includes:


- Structure design and dimensions for permanent bullet resistance guard facilities.

The design of the above-ground protective structures and hardening measures against small arms will assist to reduce the damage to critical assets or functions, namely – equipment, people, materials, structures, etc.

The facilities will protect against weapons effects such as:

- bullet penetration from small arms; considered here are pistols, rifles, sub-machine guns and small machine guns.
- fire hazards from incendiary devices; and

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- destruction from physical violence.
- **Structural design:** according to SANS 10400 Code of Practice for the application of National Building Regulations.
- **Dimensions:** approximately 3.0 m x 2.4 m = 7.2 m².

5.2 DETAILED SCOPE

- Site Establishment (Offices, Equipment, Ablutions, Material storage facilities and any other equipment needed to execute the necessary works)
- Barricade work site with solid barricading
- Contractor to perform Cable detection and verify all cables before commencing work. Provisions for identified services to be communicated and approved alongside Client.
- Supply and install standard guard house cabin with windows (2.4m x 3m) with 12000 BTU commercial air conditioner x 6, and 4 x external LED spotlights for each guard house, including water connection where required, plumbing and Solar panel where there is no electricity connection point, provide DB box, COC.
- Specifications of the Bullet proof security guard offices
- Dimensions: approximately 2.4 x 3 m = 7.2m².
- Level B6 ballistic protection including floor and roof, It must provide 360° protection
- armoured glass windows of the same rating Level B6 ballistic protection on all 4 sides (1m x 0.750m) window in door (300mm x 300mm)
- Monocrystalline Solar Panels Commercial or utility-scale panels (600W+) 2.4m times 1.3m
- 48V Hybrid Inverter paired with a LiFePO4 (Lithium Iron Phosphate) battery (minimum 5.12 kWh).
- basic electrical system installed (light, Plugs)
- ISO container blocks allow stacking and mounting on towers
- Forklift pockets for easy handling
- Integrated window grids
- Gunports in all windows to allow the guard on duty to defend himself
- Integrated air-conditioning system
- Escape hatch on roof
- Documentation slot
- Double, manual internal interlock and a clever anti-jam external lock that retracts to prevent lock- in
- Installation of hand water basin
- Installation of shelves for Microwave oven and kettle

LED Spotlight specifications

- Robust weatherproofing (IP65/IP67)
- Luminous Flux (Brightness): 3,000 lumens

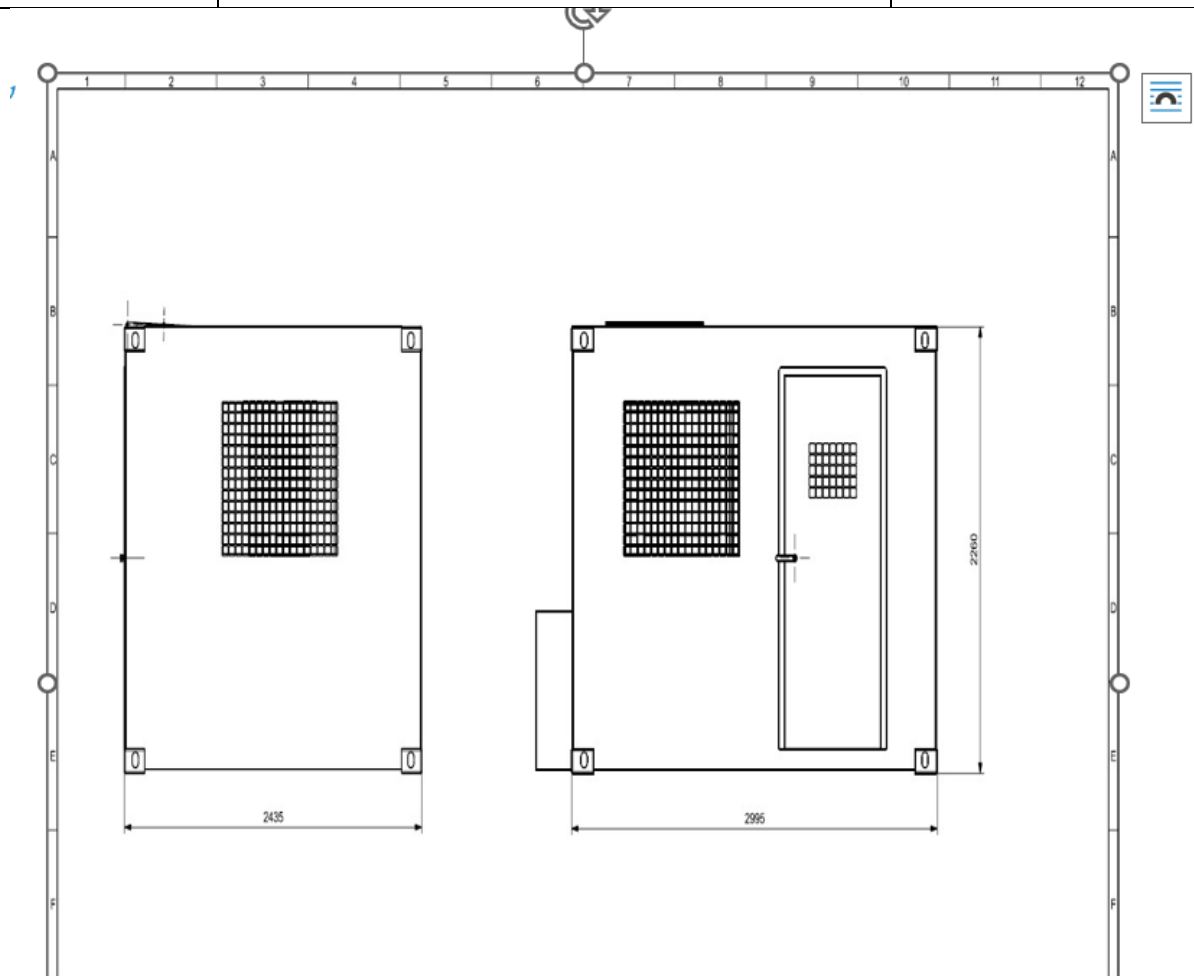
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- Power Rating: 100W
- Color Temperature: 6000K (Cool White/Daylight)
-
- Additional features such as off-grid capability (solar system)
- The contractors' evaluations are to be strictly based on their **Method Statement** (Environmental, Health and Safety team to evaluate the said procedures of execution). The team comprises of the personnel from the following departments
- Safety Risk Management.
- Environmental Management.
- Civil Engineering & Maintenance Department
- Handover to Client.
- Site De - establishment.



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6. STANDARD SPECIFICATIONS

The latest edition, including all amendments up to date of tender of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof:

Specification of Materials and Methods:

- Factory Accepted tests of the Resistance bullet proof guards' houses to be done by the Civil engineer/representatives prior to delivery to site.
- Site acceptance tests of the Resistance bullet proof guard house to be done with engineers/representatives for witnessing.
- ISO 9001:2015 approved standard.

7. AUTHORISATION

This document has been seen and accepted by:

8. REVISIONS

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9. DEVELOPMENT TEAM

The following people were involved in the development of this document:

10. ACKNOWLEDGEMENTS

N/A

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APPENDIX A: ADDITIONAL DOCUMENTATION

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