

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

D-Fence Building East London Industrial
Development Zone

Complete

Client/Site Name

D-Fence Building East London Industrial Development Zone

Billing Address

East London Industrial Development Zone SOC Ltd P O Box 5458
GREENFIELDS
5208

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.8801

Prepared by

Keith van Onselen

Conducted on

08.05.2024 15:05 SAST

Site Location

Ikhala Road
East London
EC
5201
South Africa

Disclaimer

We have pleasure in attaching our inspector's report.

Whilst every care is taken in the preparation of the report which describes the conditions as found, such report is not a guarantee carrying responsibility for results and neither this Company nor any of its employees or agents shall be liable for any loss or damage of whatsoever nature and howsoever caused, (whether by actual or alleged negligence or otherwise), in any way arising out of the acts or omissions of the Company and/or its employees or agents aforesaid.

The report is based upon the visual inspection of the external condition of the equipment where accessible without having to provide scaffolding, ladders, staging, lighting and not requiring the removal or displacement of any temporary or permanent structure, fitting or fixture.

If there are any points arising on which you require clarification, kindly communicate with the undersigned. Assuring you of our best attention at all times.

Confidentiality

In order to maintain the integrity and credibility of the inspection processes and to protect the parties involved, it is understood that the inspectors will not divulge to unauthorized persons any information obtained during this inspection unless legally obligated to do so.

Yours faithfully,

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



Nico van Loggerenberg
Managing Director

1. Report Summary

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



REGISTRATION NUMBER: 1970/010833/07

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INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

B - Full Protection, Clearance
Certificate Issued

Please Note:

The Clearance Certificate is issued subject to the items in the report being attended to.

Standard

12th Edition

NOTE:

The installation of ESFR sprinklers in the canopies if this building are a non-compliance but will be accepted on this occasion on provision that these canopies are not allocated as storage areas. Only load and offload process to take place under these canopies.

Before a new tenant is placed in this building the landlord must verify with the installer that the ESFR system installed is suitable for the new process/storage.

ASIB Contract No

UNC8801

Client Order No

PO-004203

Was the sprinkler system design in order

No

NOTE:

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Before a new tenant is placed in this building the landlord must verify with the installer that the ESFR system installed is suitable for the new process/storage.

Was the water supplies in order

Yes

Refer to report UNC9004 Estate Pump House conducted on 08/05/2024

Was the pump room in order

No

Refer to report UNC9004 Estate Pump House conducted on 08/05/2024

Was the installation control valves in order

Yes

Refer to Installation Control Valves - Section 7.

Was the storage in order

Yes

2. Hand Fire Appliances

Hose Reels - 30 metres ☒

Number:

14

Hand Fire Appliances - One unit per 100 m² of floor area.

DCP 9 kg ☒

Number:

56

DCP 4,5 kg ☒

Number:

12

CO² Gas 5 kg ☒

Number:

2

CO² Gas 2 kg ☒

Number:

3

Hand fire appliances date of the last service:

11/2023

Are the hand fire appliances due for their service. ☒ No



Photo 1

Clear access to the hand fire appliances must be maintained at all times.

3. Occupancy & Storage Guidance

Percentage Hazard.

% Ordinary Hazard

10
From 0 to 100

% High Hazard

90
From 0 to 100

The building was vacant at the time of the inspection

Stack height signs not less than 500 mm by 500 mm in size must be prominently displayed at the maximum level of the allowable storage height in all storage and process risk areas.

Occupancy / Process Risk

Occupancy/Risk

Occupancy/Risk 1

► **Ordinary Hazard / High Hazard**

High Hazard

► **Select Occupancy / Process Risk**

Process Risk

Specify Process

Vacant building

Category

CAT I

Design Density (mm/min)

ESFR

K36

4. Sprinkler System Design

Building

Building 1

Building Name

D-Fence Building East London Industrial Development Zone

Date of First Inspection

December 2019

Original Installer

Fire Sprinkler Installations

Extension By

NA

Building Area m²

8650

Height of Building in meters

12,17

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

| | | |
|-----------------|--------------------|-----------------|
| Roof Sprinklers | Ceiling Sprinklers | Void Sprinklers |
| | Canopy Sprinklers | Other |

Plant room High Velocity Sprayers

Number of Sprinklers

1191

Calculations

Hydraulic Calculations

| | |
|--|--|
| Area of Operation | |
| Area of Operation 1 | |
| ► Area of Operation | Pump Duty |
| Flows & Pressures 9000 l/min @ 1000 kPa | |
| Area of Operation 2 | |
| ► Area of Operation | Roof Most Remote Area of Operation |
| Flows & Pressures V1 7425 l/min @ 495 kPa | |
| Area of Operation 3 | |
| ► Area of Operation | Roof Most Favourable Area of Operation |
| Flows & Pressures V1 7360 l/min @ 430 kPa | |
| Area of Operation 4 | |
| ► Area of Operation | Roof Most Remote Area of Operation |
| Flows & Pressures V2 7429 l/min @ 515 kPa | |
| Area of Operation 5 | |
| ► Area of Operation | Roof Most Favourable Area of Operation |
| Flows & Pressures V2 7380 l/min @ 465 kPa | |
| Additional Sprinkler System Designs Required | No |

5. Water Supplies

► Water Stored on Site.

Yes

Refer to report UNC9004 Estate Pump House conducted on 08/05/2024

Add Water Storage Tanks




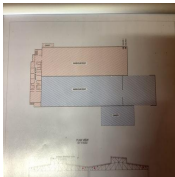
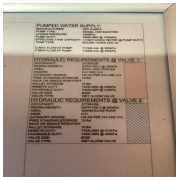
6. Pump Room

Pump Installed on Site

Yes

Refer to report UNC9004 Estate Pump House conducted on 08/05/2024

Add Pump House

| | |
|--|------------|
| 7. Installation Control Valve(s) | |
| 7.1 Sprinkler control valves accessible | Yes |
| Valve Cabinet | |
| Valve Cabinet 1 | |
| Location: | |
| South east corner | |
| <div>   </div> <div> Photo 2 Photo 3 </div> | |
| Number of Alarm Valves Installed | 2 x 200 mm |
| 7.2 Sprinkler Valve Location Plate Installed | Yes |
| 7.3 Fire Brigade Booster Pressure Limitation Plate | Yes |
| 7.4 Block Plan Installed | Yes |
| 7.4.1 Is the block plan labelled in accordance with the areas fed by the sprinkler control valve assemblies | Yes |
| 7.4.2 Are the correct installation details recorded on the block plan | Yes |
| <div>    </div> <div> Photo 4 Photo 5 Photo 6 </div> | |
| 7.5 Sprinkler Valve Instruction Chart | Yes |
| 7.6 Is a sprinkler spares box present | Yes |
| 7.6.1 Was the spares box contents accessible | Yes |
| 7.6.2 Are the spares quantities correct | Yes |
| 7.7 By Pass Arrangement Installed | Yes |

7.8 Fire Brigade Booster Connections Installed Correctly and Accessible

No

Installations must be fitted with fire brigade booster connections which will enable the fire brigade to pump water into the installation using their own equipment.

It appears that the booster connection piping to the main distribution riser is too long, which may restrict the opening of the booster plunger into the main distribution riser, this will prevent effective boosting of the sprinkler system and must be revised.

**7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet**

Yes

Sprinkler protection is required within the valve cabinet

**7.10 Flow Switch Installed Correctly**

Yes

7.11 Manifold Correctly Supported

Yes

7.12 Riser Mains Correctly Supported

Yes

7.13 Riser Mains Externally Located

No

7.14 Flow Measuring Device Installed.

Yes



Photo 7



Photo 8



Photo 9



Photo 10

Flow Test Results

Pass

Recorded Flow and Pressure

7500 l/min @ 620 kPa

7.15 Correct Pressure Gauges Installed

Yes

7.16 Correct Gauge Cocks Installed

Yes

7.17 Flanges Short Bolted

No

7.18 Loose / Missing Bolts, Nuts & Washers

No

7.19 False Alarm Prevention Pump Installed

N/A

7.20 Drain & Test Pipes Installed Correctly

No

The water motor alarm drain pipes discharge into a common manifold. This must be revised so that the drain pipes are taken separately to waste.

☒



Photo 11

7.21 Weekly tests of the installation control valves alarm bell must be carried out with the alarms sounding for at least thirty seconds.

All water pressure gauge readings must be checked and recorded.

The testing and records should be carried out by a member of staff delegated to do this.

7.22 Trunk Main Pressure (kPa)

960

7.23 Installation Pressure (kPa)

980

7.24 ASIB Overhaul Date Tag No

Yes

Last Overhaul Date

2024

Next Overhaul Date

2027

7.25 Alarm Motor & Gong Test

Passed

7.26 Are All Valves in the Correct Positions

Yes

7.27 Are All Valves Secured

Yes

Non Compliance - Items

Recommendation Items

Item

Item 1

Recommendation Items

► **Description.**

Other

Corrosion is evident on the sprinkler pipe work and must be addressed by your installer.



Photo 12

8. Storage

No storage was taking place at the time of inspection.



9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Other

Specify Other.



Below to be verified as correct

ESFR Mechanical Ventilation

Mechanical ventilation has been installed in conjunction with ESFR sprinkler protection.

It is imperative that the mechanical vents do not open automatically in a fire situation as the ESFR sprinkler system will be adversely effected which could result in the ESFR system failure.

It is important that the mechanical vents be manually operated and that the Fire Chief in charge of operations during a fire be able to make the decision whether it should be opened or remain closed.

Location of Finding.

Roof monitors

Issue 2

Finding

Pipe Support

Distribution rise/drop pipes shall be secured directly to the building structure or by hangers securing horizontal distribution pipes within 300 mm of the riser.



Location of Finding.

Dropper to attached building

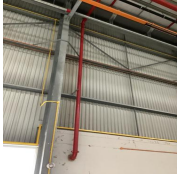


Photo 13

Area 2

Specified Area.

External Canopies

System Issue

Issue

Issue 1

Finding

Other

Specify Other.



Corrosion is evident on the sprinkler pipe work and must be addressed by your installer.

Location of Finding.

Canopies particularly on the clampons

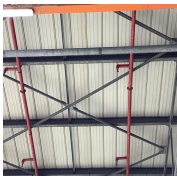


Photo 14



Photo 15

Issue 2

Finding

Pipe Support

Terminal hangers on distribution pipes are exceeding the maximum distance of 450 mm from the end of the distribution pipe.



Location of Finding.

Various

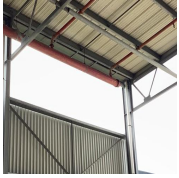


Photo 16

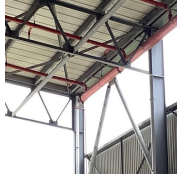


Photo 17

General Notes

Yes

NOTE:

The installation of ESFR sprinklers in the canopies of this building are a non-compliance but will be accepted on this occasion on provision that these canopies are not allocated as storage areas. Only load and offload process to take place under these canopies.

Before a new tenant is placed in this building the landlord must verify with the installer that the ESFR system installed is suitable for the new process/storage.



Photo 18



Photo 19

10. Proof of Inspection

Proof of inspection.

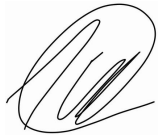
For and on behalf of client:



Camagwini Ngxokolo-Nomatye
10.05.2024 11:54 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
10.05.2024 11:54 SAST

WARNING

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The primary function of the ASIB is to protect the interests of the end user and as a result, we constantly update the list of registered suppliers and installing companies.

These companies have proven that they are capable of installing, extending and servicing fire sprinkler systems to the correct standards.

We have had occasion to remove companies for valid reasons which are not confidential and include, but are not limited to, poor workmanship, design, fabrication, incorrect advice, lack of skilled staff, fraudulent quotations and financial instability.

It is important to note that if a company is not listed with the ASIB and carries out work on a sprinkler system we will not be in a position to issue a Clearance Certificate for the premises which, in turn, may place you at risk.

In selecting your service provider, it is important to appreciate that the ASIB is not seeking to infer that a non-listed service provider is necessarily not capable of offering the required service to an appropriate standard. What the ASIB is saying, is that the ASIB is not in a position to give you the assurance that a non-listed provider concerned has demonstrated that it complies with the ASIB standards. In addition, because the ASIB is unable to fully inspect an installation (which by its nature has many inaccessible components), you will appreciate that the ASIB is also unfortunately not in a position to issue a Clearance Certificate in relation to an installation done by a non-listed company.

We advise you to check the listing status of the service provider you choose especially if there is any uncertainty.

You can access our website at <http://www.asib.co.za> which is current or phone our offices at 011 642 1703 for verification.

Email:

Email: 1

Recipient

Mteteleli@elidz.co.za

Email: 2

Recipient

camagwini@elidz.co.za

Media summary



Photo 1



Photo 2



Photo 3

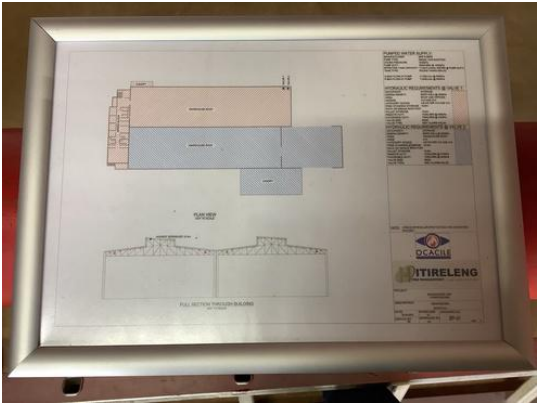


Photo 4

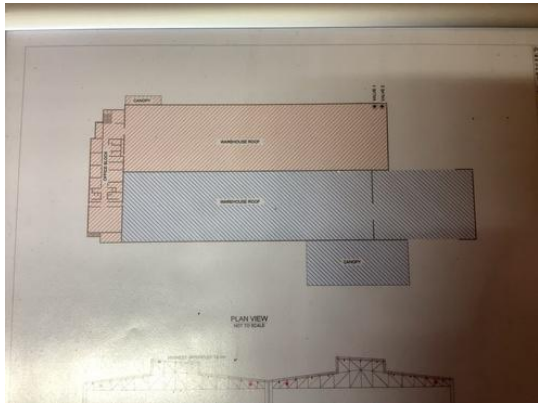


Photo 5

| | |
|--|--|
| PUMPED WATER SUPPLY: | |
| MANUFACTURER: | SPP PUMPS |
| PUMP TYPE: | DIESEL AND ELECTRIC |
| CHURN PRESSURE: | 1040kPa |
| PUMP DUTY: | 9000L/MIN @ 1000kPa |
| EFFECTIVE TANK CAPACITY: | 1116m ³ /124min WATER @ PUMP DUTY |
| TANK TYPE: | ROUND TANKS 50% X2 |
| Q MAX FLOW AT PUMP: | 11700L/min @ 995kPa |
| P MAX FLOW AT PUMP: | 11365L/min @ 995kPa |
| HYDRAULIC REQUIREMENTS @ VALVE 1: | |
| OCCUPANCY: | STORAGE |
| DESIGN DENSITY: | ESFR K36.3 @ 280kPa |
| AREA: | ROOF AND OFFICES |
| HAZARD: | H.H AND O.H |
| CATEGORY GOODS: | H.H AS PER 312 AND 313 |
| FREE STANDING STORAGE: | 10.6m |
| RACK OR SINGLE ROW POST: | |
| PALLET STORAGE: | 10.6m |
| REMOTE DUTY: | 7425L/MIN @ 495kPa |
| FAVORABLE DUTY: | 7380L/MIN @ 430kPa |
| VALVE SIZE: | Ø200 |
| VALVE TYPE: | WET ALARM VALVE |
| HYDRAULIC REQUIREMENTS @ VALVE 2: | |
| OCCUPANCY: | STORAGE |
| DESIGN DENSITY: | ESFR K36.3 @ 280kPa |
| AREA: | WAREHOUSE ROOF |
| HAZARD: | H.H |
| CATEGORY GOODS: | H.H AS PER 312 AND 313 |
| FREE STANDING STORAGE: | 10.6m |
| RACK OR SINGLE ROW POST: | |
| PALLET STORAGE: | 10.6m |
| REMOTE DUTY: | 7420L/MIN @ 515kPa |
| FAVORABLE DUTY: | 7380L/MIN @ 465kPa |
| VALVE SIZE: | Ø200 |
| VALVE TYPE: | WET ALARM VALVE |

Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19