

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

East London Industrial Development
Zone - Building HW1 - Ebor

Complete

Client/Site Name

East London Industrial Development Zone - Building HW1 - Ebor

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.9262

Prepared by

Keith van Onselen

Conducted on

18.06.2024 10:39 SAST

Site Location

Ikhala Road
East London
EC
5201
South Africa
(-33.059508488410295,
27.851899270288925)

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

A handwritten signature in black ink, appearing to read 'Nico van Loggerenberg', written in a cursive style.

Nico van Loggerenberg
Managing Director

1. Report Summary

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



REGISTRATION NUMBER: 1970/010833/07

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2041

INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

C - Full Protection, Clearance
Certificate not Issued

Clearance certificate withheld due to the following:

Water Supplies - See Report



Storage - See Report



Sprinkler System - Excessive Fault



Standard

12th Edition

ASIB Contract No

UNC.9262

Client Order No

004203

Was the sprinkler system design in order

No

The roof height for this building exceeds what is allowable for ESFR sprinkler protection. This must be addressed

Was the water supplies in order

No

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

Refer to Installation Control Valves - Section 7. Item No. 7.14. Flow Measuring Device.

Was the pump room in order

Yes

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

Was the installation control valves in order

No

Refer to Installation Control Valves - Section 7.

Was the storage in order

No

- Refer to Storage - Section 8.

2. Hand Fire Appliances

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

Hand fire appliances date of the last service:



Photo 1

Are the hand fire appliances due for their service.

No

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

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

Storage Risk

Specify Process

Injection Moulding

Category

CAT II

Design Density (mm/min)

ESFR

Where goods of differing categories are stored within the same area, it is the stack height limitations of the goods with the highest category that will apply.

► **Product Stored**

Vehicle head liners

Category

CAT III

Storage

Method

Method 1

Storage Method

Free Standing / Block Storage

Design Density (mm)	ESFR
ESFR K-Factor	
36	
Roof Height (m)	17 to be verified
Storage Height (m)	
10,6	
Method 2	
Storage Method	Beam Pallet Racking
Design Density (mm)	ESFR
ESFR K-Factor	
36	
Roof Height (m)	17 to be verified
Storage Height (m)	
10,6	

4. Sprinkler System Design

Building

Building 1

Building Name

East London Industrial Development Zone - Building HW1 - Ebor

Date of First Inspection

February 2021

Original Installer

February 2021

Extension By

N/A

Building Area m²

7100

Height of Building in meters

17

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Void Sprinklers

Canopy Sprinklers

Number of Sprinklers

1101

Calculations

Hydraulic Calculations

Area of Operation

Area of Operation 1

Flows & Pressures

9000 l/min @ 1000 kPa

Area of Operation 2

► Area of Operation

Roof Most Remote Area of Operation

Flows & Pressures

7450 l/min @ 670 kPa

Area of Operation 3

► Area of Operation

Roof Most Favourable Area of Operation

Flows & Pressures

7345 l/min @ 560 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



Photo 2

Number of Alarm Valves Installed

201 x 150 mm, 1 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



Photo 3

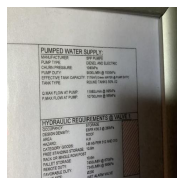


Photo 4

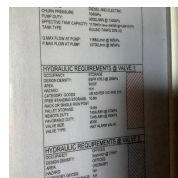


Photo 5

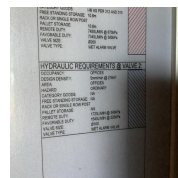


Photo 6

7.5 Sprinkler Valve Instruction Chart

No

A weatherproof valve instruction chart that relates specifically to the control valve assembly installed, (not a generic instruction chart) shall be mounted on a wall within the control valve cabinet or if the valves are internally located, as close to these as possible.

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 is recommended that the fire brigade pressure booster inlets must be repositioned so that they are located external to the installation control valve cabinet and easily accessible.



7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet	Yes
7.10 Flow Switch Installed Correctly	No

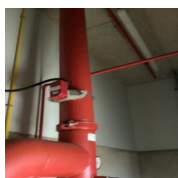


Photo 7

The flow switch must be fitted downstream from the alarm valve with a 25mm test pipe installed at least 2 pipe diameters downstream of the flow switch.

7.11 Manifold Correctly Supported	Yes
7.12 Riser Mains Correctly Supported	No

The riser main must be properly supported in accordance with the rules.

7.13 Riser Mains Externally Located	No
7.14 Flow Measuring Device Installed.	Yes
Flow Test Results	Fail

Recorded Flow and Pressure

Not installed as per manufacturer's specifications.
This must be corrected

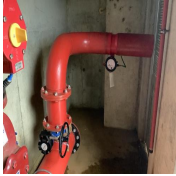


Photo 8

7.15 Correct Pressure Gauges Installed

No

No trunk main gauge installed.

All pressure gauges fitted to a sprinkler system shall:

Read in kPa.

Have a maximum scale value of 150% of the maximum working pressure of the system.

Have divisions not exceeding 20 kPa for pressures up to 1000 kPa.

Have divisions not exceeding 50 kPa for pressures above 1000 kPa and up to 1600 kPa.

Have divisions not exceeding 100 kPa for pressures above 1600 kPa.

Have a dial face of not less than 100 mm in diameter.

Be of the glycerine filled type.

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

Yes

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)

1160

7.23 Installation Pressure (kPa)

1380

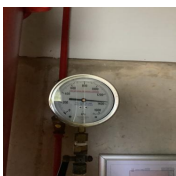


Photo 9

7.24 ASIB Overhaul Date Tag No

Yes

Last Overhaul Date

2021

Next Overhaul Date

2024

7.25 Alarm Motor & Gong Test

Failed

7.26 Are All Valves in the Correct Positions

Yes

7.27 Are All Valves Secured

Yes

Non Compliance - Items

Item

Item 1

Non Compliance Items**► Description**

Other

Maximum 1200 kPa

The system pressure has exceeded the maximum allowable pressure of 1200 kPa, this must be investigated and rectified by your installer.

Recommendation Items

8. Storage

Are the required clearances being maintained.

Yes

Are the storage heights exceeded.

No

At the time of inspection the storage heights were being adhered to and found to be in order.

Are Excessive Height Conditions Applicable

No

The longitudinal and/or transverse flue spaces are not being maintained



The minimum longitudinal and transverse flue spaces shall not be less than 150 mm.

Location:

Racks

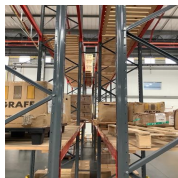


Photo 10



Photo 11

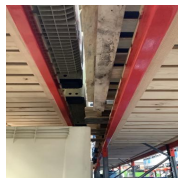


Photo 12

Issue

Issue 1

ESFR

Any closed bottom storage must have covers placed over the top



Photo 13



Photo 14



Photo 15

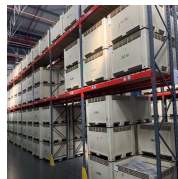


Photo 16



Photo 17

Location:

Various



Photo 18

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Offices

System Issue

Issue

Issue 1

Finding

Sprinkler Spacing

Sprinklers are out of effective working distance.



Location of Finding.

Various upstairs

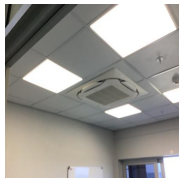


Photo 19



Photo 20



Photo 21



Photo 22



Photo 23

Issue 2

Finding

Partial Protection /
Communicating Areas

Portion of premises sprinkler protected with communicating sections that are not.



Partial protection can lead to a fire originating in the protected area radiating heat into the unprotected portion of the premises and starting secondary fires. The heat from these fires radiates or spreads back into the protected area causing excessive sprinkler operation.

Conversely, a fire originating in the unprotected portion will radiate heat or spread into the protected portion rapidly causing unnecessary sprinkler operation and overwhelming the sprinkler system installed.

Location of Finding.

Server room



Photo 24



Photo 25

Area 2

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Other

Surfaces exceeding 1,0 metre in width.



Surfaces which exceed 1,0 metre in width will obstruct the water discharged from the sprinklers above which could result in an ignition beneath these surfaces not being controlled or extinguished.

Location of Finding.

Vacuum platform



Photo 26

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 canopy
Risers from valves

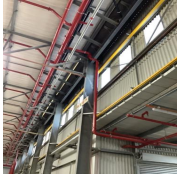


Photo 27



Photo 28

Issue 3

Finding

Pipe Support

Terminal range pipe hangers are exceeding the maximum distance of 750 mm from the end of the range pipe.



Location of Finding.

Various

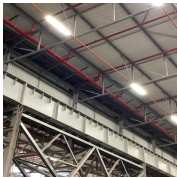


Photo 29

Issue 4

Finding

Sprinkler Heads

Distribution pattern of sprinklers affected.



Location of Finding.

Middle roof monitor above crane



Photo 30

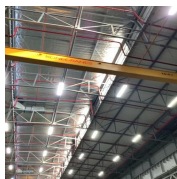


Photo 31

Issue 5

Finding

Other

Specify Other.



Exposed / unprotected pipe work

Sprinkler pipe work must pass through a sprinkler protected area or be encased in a 2 hour fire rated enclosure.

Location of Finding.

Main feed



Photo 32

Issue 6

Finding

Other

Specify Other.



ESFR Mechanical Ventilation (verification required)

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.

It might also be advisable to zone the mechanical vents so as to have the option of opening all the vents at the same time or only certain zones.

Issue 7

Finding

Other

Specify Other.



The roof height for this building exceeds what is allowable for ESFR sprinkler protection. This must be addressed

Area 3

Specified Area.

External Canopies

System Issue

Issue

Issue 1

Finding

Other

Specify Other.

☒

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.

Location of Finding.

Loading canopy

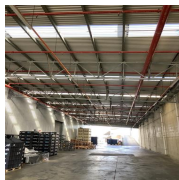


Photo 33

Issue 2

Finding

Other

Location of Finding.

Combustible roof insulation or sheeting may not be used in conjunction with ESFR protection

ESFR sprinklers can only be located beneath non-combustible surfaces. Combustible translucent sheeting, may in the event of a fire negatively impact the operation of the ESFR installation.

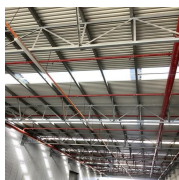


Photo 34

Issue 3

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.

☒

Location of Finding.

Distribution main

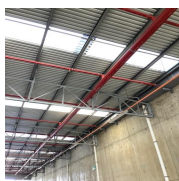


Photo 35

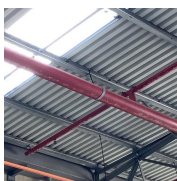


Photo 36

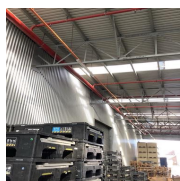


Photo 37

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
20.06.2024 12:35 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:36 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

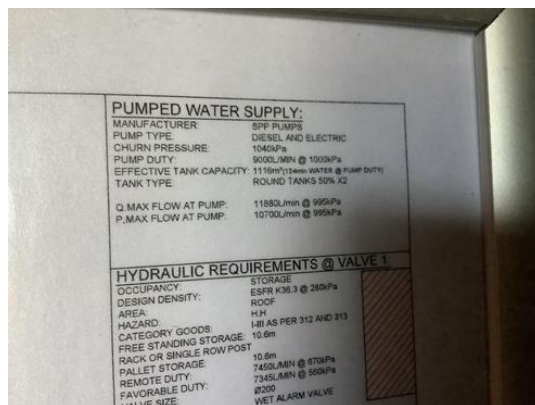


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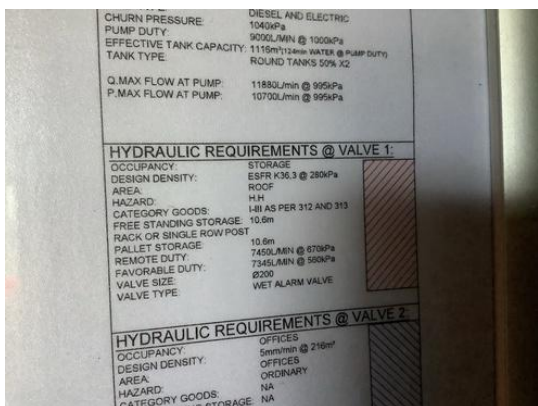


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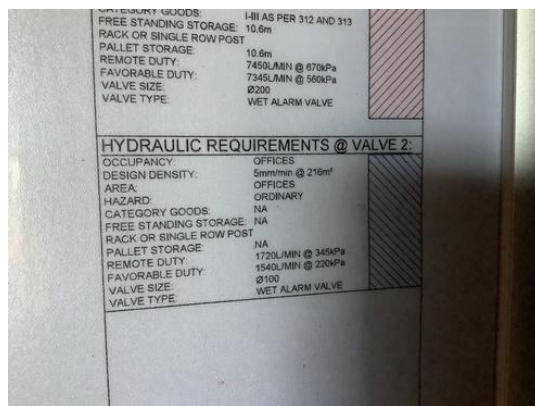


Photo 6



Photo 7



Photo 8



Photo 9

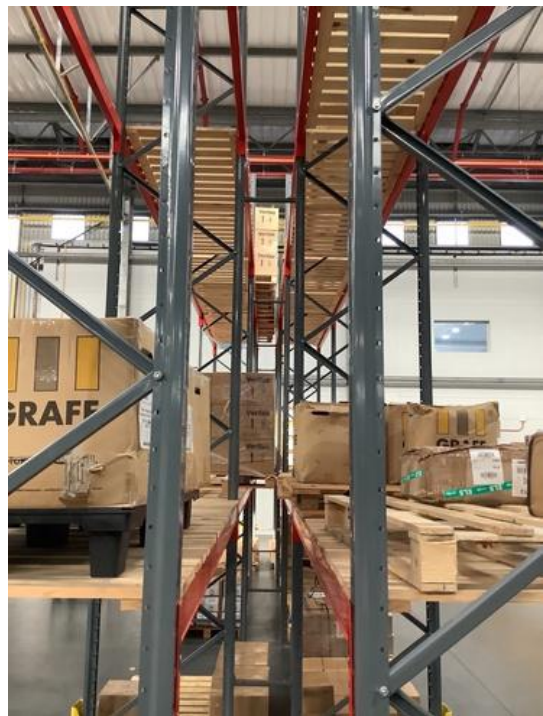


Photo 10



Photo 11



Photo 12



Photo 13



Photo 14

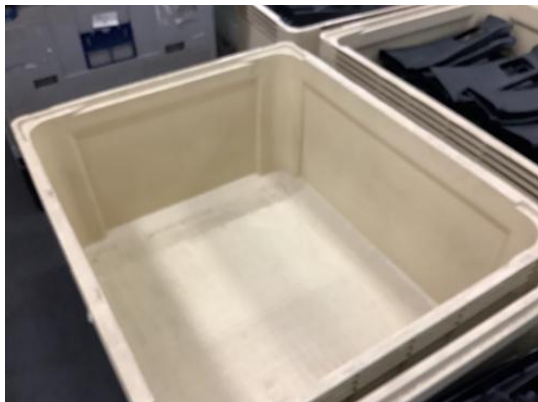


Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21



Photo 22



Photo 23



Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31



Photo 32



Photo 33



Photo 34



Photo 35



Photo 36



Photo 37