

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

East London Industrial Development -
Also - HS1

Complete

Client/Site Name

East London Industrial Development - Also - HS1

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.9499

Prepared by

Keith van Onselen

Conducted on

18.06.2024 11:24 SAST

Site Location

East London IDZ 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

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

1407 IMBALI
CNR LOUIS BOTHA AND
TUDHOPE AVENUES
BEREA
JOHANNESBURG
2198

TELEPHONE: +27 11 642 1703
FACSIMILE: +27 11 642 1019
E-MAIL: asib@asib.co.za
WEB SITE: www.asib.co.za

P O BOX 3139
HOUGHTON
2041

INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

© 1970 - 2024 AUTOMATIC SPRINKLER INSPECTION BUREAU ALL RIGHTS RESERVED

Code

C - Full Protection, Clearance
Certificate not Issued

Clearance certificate withheld due to the following:

Sprinkler System - Excessive Fault



Standard

12th Edition

ASIB Contract No

UNC.9499

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

Yes

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

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

Yes

2. Hand Fire Appliances

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

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
----------------------	---------------------

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**

Storage Risk

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**

Logistics warehouse - Automotive Components Plastic

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

Storage Height (m)

10,6

Method 2

Storage Method

Beam Pallet Racking

Design Density (mm)

ESFR

ESFR K-Factor

36

Roof Height (m)

17

Storage Height (m)

10,6

4. Sprinkler System Design

Building

Building 1

Building Name

East London Industrial Development - Also - HS1

Date of First Inspection

August 2021

Original Installer

Fire Suppression Solutions

Extension By

NA

Building Area m²

5900

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

845

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 7435 l/min @ 542 kPa	
Area of Operation 3	
► Area of Operation	Roof Most Favourable Area of Operation
Flows & Pressures 7365 l/min @ 445 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



Photo 3

Number of Alarm Valves Installed

1 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 4

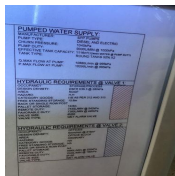


Photo 5

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 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

Sprinkler protection is required within the valve cabinet



7.10 Flow Switch Installed Correctly

No

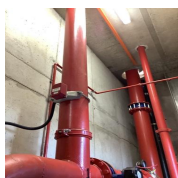


Photo 6

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

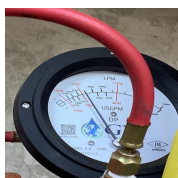


Photo 7

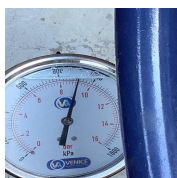


Photo 8

Flow Test Results

Pass

Recorded Flow and Pressure

7600 l/min @ 920 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 drain and test pipes discharge within the valve cabinet. This must be revised so they discharge externally to the valve cabinet.



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)

900

7.23 Installation Pressure (kPa)

1360



Photo 9

7.24 ASIB Overhaul Date Tag No	No
--------------------------------	----

The installation control valves must be overhauled three years after date of installation by an ASIB approved and registered installer, and once every 3 years thereafter. An ASIB valve overhaul date tag must be attached to the valve set after completion of the overhaul.

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

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.



Photo 10

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

Yes

Does the system design cater for the excessive height condition.

Yes

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Warehouse

System Issue

Issue

Issue 1

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.

Roof

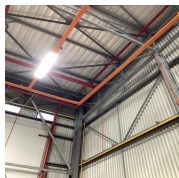


Photo 11

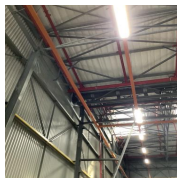


Photo 12

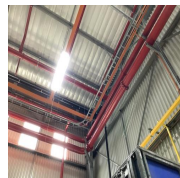


Photo 13

Issue 2

Finding

Other

Specify Other.



ESFR Mechanical Ventilation (to be verified)

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.

Location of Finding.

Roof

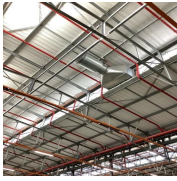


Photo 14

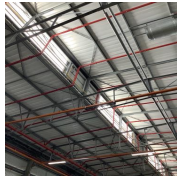


Photo 15

Issue 3

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

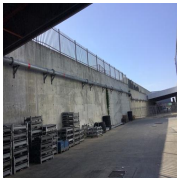


Photo 16

Issue 4

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



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.

Risers from valves

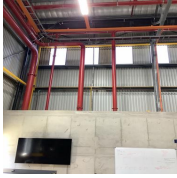


Photo 17

Issue 5

Finding

Other

Specify Other.



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

Area 2

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

Issue 2

Finding

Other

Specify Other.



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.

Location of Finding.



Photo 18

Issue 3

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.

Main feed



Photo 19

General Notes



Photo 20

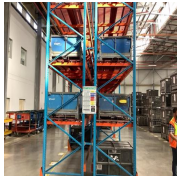
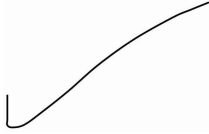


Photo 21

10. Proof of Inspection

Proof of inspection.

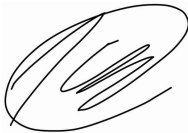
For and on behalf of client:



Camagwini Ngxokolo-Nomatye
25.06.2024 08:33 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
25.06.2024 08:33 SAST

WARNING

© The Automatic Sprinkler Inspection Bureau (Pty) Ltd 1970-2024 All rights reserved.

Copyright subsists in this work. All information contained in this report is the property of The Automatic Sprinkler Inspection Bureau (Pty) Ltd. No part of this report may be reproduced, published, performed, broadcast, transmitted or adapted in any form or by any electronic, mechanical or other means without the written permission of the copyright holder. Any unauthorised reproduction, publishing, performance, broadcasting, transmission or adaption of this work will constitute copyright infringement and render the doer liable under both civil and criminal law.

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

PUMPED WATER SUPPLY:	
MANUFACTURER:	SPP PUMPS
PUMP TYPE:	DIESEL AND ELECTRIC
CHURN PRESSURE:	1040kPa
PUMP DUTY:	9000L/MIN @ 1000kPa
EFFECTIVE TANK CAPACITY:	1116m³ (124mm WATER @ PUMP DUTY)
TANK TYPE:	ROUND TANKS 50% X2
Q, MAX FLOW AT PUMP:	10880L/min @ 990kPa
P, MAX FLOW AT PUMP:	10250L/min @ 990kPa

HYDRAULIC REQUIREMENTS @ VALVE 1:	
OCCUPANCY:	STORAGE/PROCESS
DESIGN DENSITY:	ESFR K36.3 @ 280kPa
AREA:	ROOF
HAZARD:	H.H
CATEGORY GOODS:	I-II AS PER 312 AND 313
FREE STANDING STORAGE:	10.6m
RACK OR SINGLE ROW POST:	
PALLET STORAGE:	10.6m
REMOTE DUTY:	7435L/MIN @ 542kPa
FAVORABLE DUTY:	7385L/MIN @ 445kPa
VALVE SIZE:	8200
VALVE TYPE:	WET ALARM VALVE

HYDRAULIC REQUIREMENTS @ VALVE 2:	
OCCUPANCY:	OFFICES
DESIGN DENSITY:	5mm/min @ 218m
AREA:	OFFICE BLOCK
HAZARD:	ORDINARY
CATEGORY GOODS:	NA
FREE STANDING STORAGE:	NA
RACK OR SINGLE ROW POST:	NA
PALLET STORAGE:	1880L/MIN @ 220kPa
REMOTE DUTY:	1540L/MIN @ 180kPa
FAVORABLE DUTY:	1540L/MIN @ 180kPa
VALVE SIZE:	Ø150
VALVE TYPE:	WET ALARM VALVE

Photo 5



Photo 6

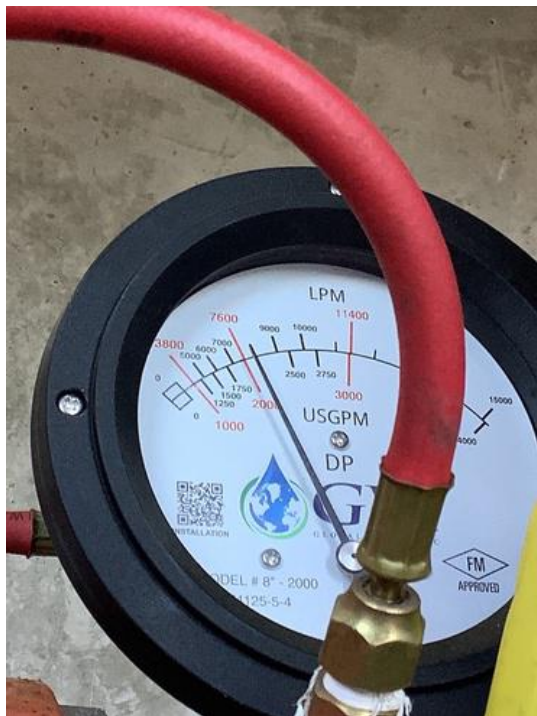


Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14

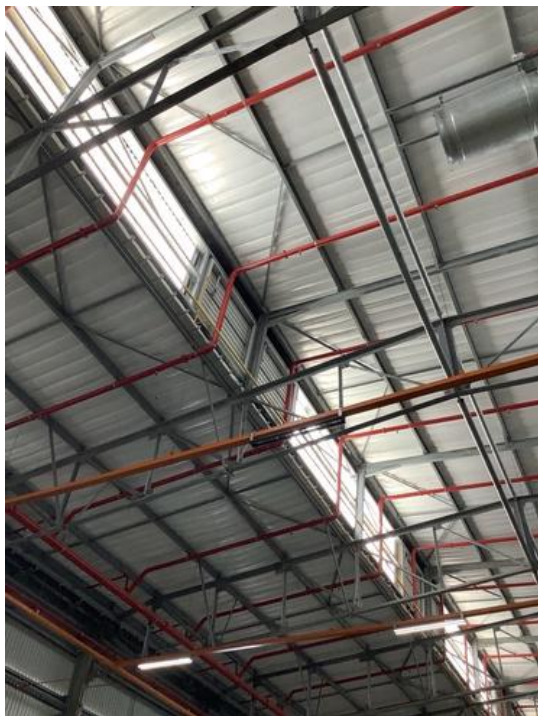


Photo 15



Photo 16



Photo 17

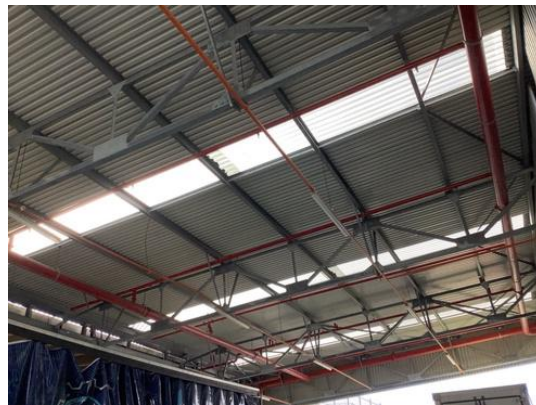


Photo 18



Photo 19

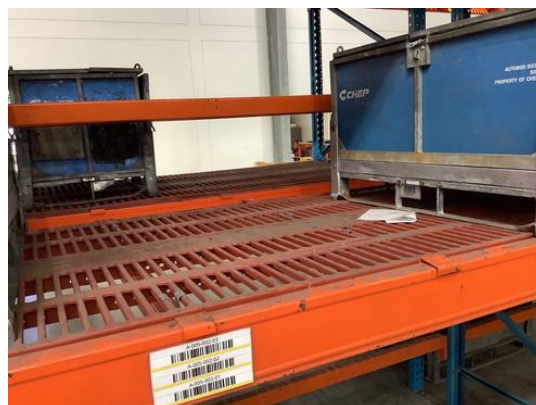


Photo 20

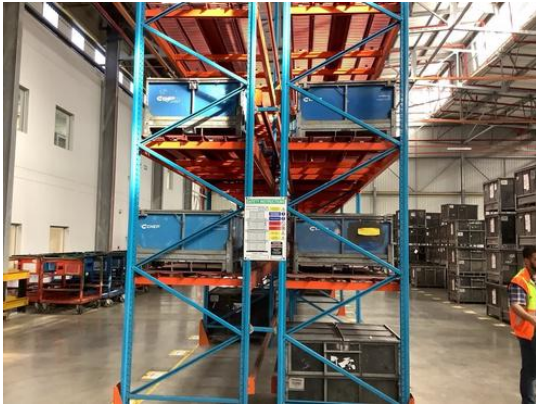


Photo 21